

the theory under notice, things were quite different a thousand years before: and M. Rutot points out a striking resemblance between the *pintaderas* (clay stamps for tattooing) of the Canary Islands and Mexico, suggesting that the lavish use of precious metals at Cerne was due to commerce with Central America. Classical scholars, however, will not be prepared to identify the first three letters of Atlantis with a common termination of place-names in Central America. The main theory is certainly attractive, and gives meaning to many local myths and traditions—a feature of recent research in the Mediterranean area. It is now held that the Minoans of Crete came from North Africa: is it possible that Knossos was an eastern outpost of Atlantis?

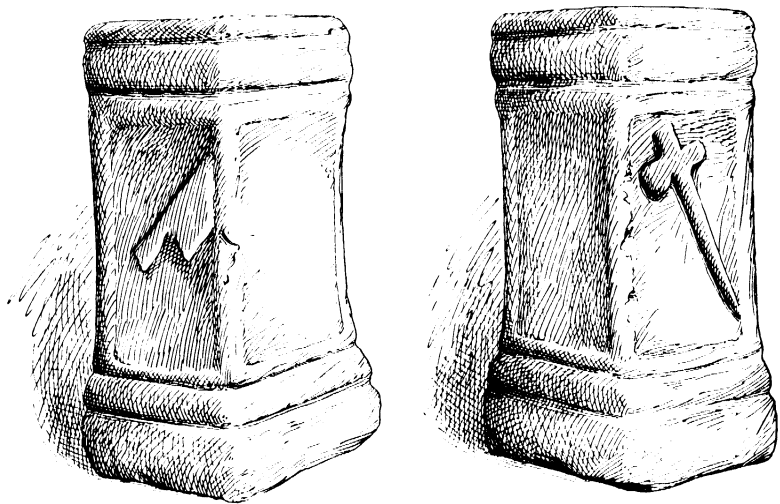
Oldtiden: Tidskrift for Norsk Forhistorie, vol. ix (Kristiania, 1920): First comes an impressive account of the Borre Fund (named after a famous burial-place on the west side of Kristiania Fjord) which has been started to finance archaeological exploration in Norway, and already amounts to over £6,000 capital. So much has been done without its help that extraordinary results may be expected of the new scheme, and the example should have a stimulating effect elsewhere.

The number is full of good things, but Hr. Nummedal's paper has a special bearing on British archaeology. In dealing with certain primitive Stone Age forms in Norway, he recalls Professor Montelius's advocacy of a Solutré period in Sweden, and suggests comparisons with the still earlier Aurignac period, hitherto unsuspected in the North. Core-like and carinated planes are illustrated as well as hammers made from pebbles, with shallow circular depressions in the faces alleged to be intended for the thumb and finger. Such are certainly found elsewhere in palaeolithic surroundings and may have continued through several periods, but in the present case geological arguments are brought forward in favour of a date before the maximum depression of the district in the *Tapes* or *Littorina* period, that is, before the earliest shell-mounds. The sites in question were on the sea-shore when the land was 60 ft. lower than it was when the kitchen middens were formed: and the interval of time has yet to be estimated. Some help may be obtained from Cornwall, where similar types have been found (with gravers) on sites 150–300 ft. O.D., mostly near the sea and invariably close to a stream or spring (J. G. Marsden in *Proc. Prehist. Soc. E. Anglia*, iii, 59, and previous papers). An equation of beds and earth-movements on either side of the North Sea would be a distinct addition to our knowledge of the Stone Age, and it may be mentioned that a raised beach at 65 ft. O.D. has been noticed on the east of Land's End, not four miles from some of the Stone Age 'floors' (H. Dewey in *Geological Magazine*, April 1913, 156). Some further observations on the successive shore-levels of southern Norway are contributed by Hr. Øyen to this number of *Oldtiden*.

Fornvænnen: Meddelanden från K. Vitterhets Historie och Antikvitets Akademien, 1920, parts 1, 2 (Stockholm). It is not surprising that an archaeological dictum by Snorre Sturlason, who wrote about 1240, should in these days need amendment. This it has now undergone at the hands of Hr. Lindqvist, who takes as his text the following passage from the Prologue to the *Ynglinga Saga*: 'As to funeral rites, the earliest age is called the age of burning, because all

The site would appear to be that of a Roman brick- and tile-kiln, but in the absence of pottery it is not possible to be absolutely certain of its age. Some specimens of the tiles have been given to the Museum of the Wiltshire Archaeological Society at Devizes.

Roman altar in Scilly.—There is but little history attached to what seems to be a Roman altar now preserved among the figure-heads of wrecked ships in the Valhalla of Tresco Abbey. Two views are here given from photographs kindly supplied by Messrs. Gibson and Son of Mount's Bay Studio; and these show a sacrificial knife and axe on the two sides, but there are no traces of an inscription on the front. The altar is of coarse granite, 32 in. high, 17 in. across the base, and 15 in. square at the top. The owner, Major Dorrien Smith, is convinced that it is no recent importation from the mainland, and his



Roman altar in Scilly.

predecessor, Mr. Augustus Smith, brought it from the island of St. Mary's in 1870, where it used to stand near the Garrison Hill, beside an old masonic lodge. Mr. George Bonsor thinks that it came originally from Old Town (the ancient capital of St. Mary's before the Elizabethan Star Castle was built in 1593), that being the only place where Roman antiquities have been discovered in the islands; but he himself has found earlier relics, and promises a report on his excavations carried out in 1899-1902.

London Bridge.—One of the arches of old London Bridge has recently been discovered during building operations. The exact date cannot be determined with accuracy, but it is apparently mediæval, and is built of Reigate stone, with a very flat trajectory. At the beginning of the eighteenth century three flat supporting ribs, one bearing the date 1703, were added. The under surface is considerably water worn, and the arch is clearly one of those close to which stood the mill wheel, by means of which water was raised into the tower alongside the bridge. The span of the arch is estimated to be about 30 ft.

Recent archaeological discoveries in Perth.—During the autumn of last year, while some workmen were making excavations for the foundations of a new cinema house at the corner of St. John's Place and King Edward Street in Perth, a hoard of 1,128 coins (18 gold, 611 silver, and 499 billon) was discovered within a few inches of the surface on the northern boundary of the site. The gold coins consisted of 14 Unicorns, 2 Riders, and 1 Half-Rider of James I, and 1 Noble of Maximilian and Philip the Fair of Burgundy, dated 1488; the silver coins, 1 Penny of Alexander III, 1 Groat and 1 Half-Groat of Robert III, 189 Groats and 12 Half-Groats of James I, 84 Groats of James II, 56 Groats and 5 Half-Groats of James III, and 6 Groats of James IV, as well as 256 English coins of Edward III, Henry V, Henry VI, and Edward IV; the billon coins, 436 Placks and 63 Half-Placks of James III.

In making the trenches for the building a depth of more than six feet of accumulated refuse was dug into, and in the deposit were found many fragments of medieval glazed pottery, animal bones, shells, pieces of leather and of iron. In the bottom of the excavations several wooden piles were exposed showing circular holes about $1\frac{1}{2}$ in. in diameter bored in the side, and still retaining the round tenons of cross wooden ties. Towards the south-east corner of the area a tripod pot of bronze, with the remains of its iron bow-handle still attached, was unearthened. The site, which lies barely 100 yards north-west of St. John's Church, the oldest building in Perth, was in olden times known as the Little College Yard.

The hoard of coins will be described by Dr. George Macdonald, C.B., F.S.A., Scot., in the next volume of the *Proceedings of the Society of Antiquaries of Scotland*, and in the *Numismatic Chronicle*.

Local War Records.—To the future student and historian of the War Period the records of local activities will furnish one of the most valuable sources of information. With a view to securing the preservation of such records, a conference was convened last autumn by the British Academy, at the request of the British Editorial Board for the Economic and Social History of the War Period, which has been undertaken by the Carnegie Endowment. A Committee was formed under the Chairmanship of Sir William Beveridge, and steps are being taken to organize throughout the country the collection and classification of the records. Many of these records may appear at the moment unimportant, but may ultimately prove to be of the utmost value for local and general history. It is therefore essential that until the records have been thoroughly examined none should be destroyed.

It is hoped that in every locality committees, composed of representatives of local authorities, local historical and archaeological societies, and others interested, may be formed to undertake the work of examination and classification. Any one willing to help in the formation of a local committee is asked to communicate with the Organizing Secretary, Miss M. Wretts-Smith, London School of Economics, Clare Market, London, W.C. 2.

Centenary of the École des Chartes.—The centenary of the foundation of the École des Chartes was held in Paris in February, and consisted of a commemorative meeting at the Sorbonne, under the presidency of M. Millerand, President of the Republic, and of a banquet presided over by the Minister of Public Instruction. The Society of Antiquaries was represented at these ceremonies by M. Camille Enlart, Honorary F.S.A., who read an address of congratulation from the President on behalf of the Society. A volume dealing exclusively with the commemoration will be issued by the École des Chartes.

International Institute of Anthropology.—The Paris School of Anthropology has taken the lead in founding an International Institute of Anthropology, which is destined to take the place of the International Prehistoric Congress, disorganized by the War. *L'Anthropologie*, xxx, nos. 3-4, gives an account of the creation and first meeting of the new body, and the following are named as British representatives:—Sir Edward Brabrook, Mr. Savage Landor, Sir William Ridgeway, and Prof. Arthur Thomson, also two from India and Canada. Dr. Capitan and Count Begouen have taken office as scientific and administrative Secretaries respectively; and the provisional council includes 25 French members and 48 from 17 other countries. Many valuable reports have been published since the first congress in 1866, and the new organization will not only record but stimulate research in fields that yearly grow more prolific and extensive. There is every reason to believe that Britain will actively co-operate in such a movement under allied auspices. The next congress is fixed for 25th July—1st August, at Liège, and the central offices of the Institute are at 15 rue de l'École de Médecine, Paris VI.

Revue anthropologique.—In 1918 the *Revue mensuelle de l'École d'Anthropologie de Paris*, after twenty-seven years under that title, became the *Revue anthropologique*, conducted as before by the professors of the School of Anthropology. A year later an *École libre d'Anthropologie* was founded at Liège by the Association for the study and teaching of anthropological sciences, and its organ has now been amalgamated with the Paris *Revue anthropologique*, which will in future be the official publication of the International Institute of Anthropology. It may be added that the *Revue* has contained in the past many important papers on palaeolithic remains from the French caves, and has done much to fix the nomenclature of that branch of anthropology. The combined forces of French and Belgian specialists should, and no doubt will, produce much that will be welcome on this side of the Channel, especially if the prehistoric interest is maintained. What applies to France and Belgium may apply also to Britain before its separation from the Continent in late palaeolithic times.

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Obituary Notice.

Robert de Lasteyrie.—M. le Comte Robert de Lasteyrie, Membre de l'Institut, and one of our Honorary Fellows, who died on 29th January last, was a commanding figure among the archaeologists of France. He was born in Paris on 15th November 1849. His great-grandmother was a sister of Mirabeau. His father, Ferdinand de Lasteyrie, who served in his young days as aide-de-camp of his relative, General La Fayette, was elected Membre de l'Institut in 1860, and was the author of the *Histoire de la peinture sur verre* (1837-56), and of the *Histoire de l'orfèvrerie* (1875). Robert de Lasteyrie was studying law and archaeology when the war of 1870 broke out; he served with distinction in the army of the Loire, was wounded at Le Mans, and received the cross of the Légion d'honneur. Resuming his studies after the war, he took his degree of 'bachelier en droit' in 1871. In the following year he gave up the study of the law for archaeology, and became 'archiviste-paléographe' in 1873. His thesis for the École des Chartes, on the *Comtes et Vicomtes de Limoges*, earned him a medal in 1875. He had already so distinguished himself as to become the favourite pupil of Quicherat, the director of the École des Chartes, who in 1875 entrusted him with a course of lectures on military architecture. Two years later, when Quicherat fell ill, Lasteyrie took his place, first as 'suppléant', and then as professor of medieval archaeology at the École des Chartes, a position which he held for thirty years, from 1880 to 1910. He was an admirable professor, and his teaching had a powerful influence on the study of medieval archaeology throughout France. His influence on his pupils was expressively indicated by their veneration for 'le maître'. From 1883, as secretary of the archaeological section of the Comité des Travaux historiques, he directed the *Bulletin archéologique* for some thirty years. In 1890 he was elected a member of the Académie des Inscriptions et Belles-Lettres, of which he became President in 1901. An account of his works, which are too numerous to be set out here, will be found in the 'discours' delivered by the President of the Académie after his death (4th February 1921), from which many of the particulars in this notice have been taken. Among his more notable contributions may be mentioned his study of *L'église Saint-Martin-de-Tours* (1891); *La déviation de l'axe des églises, est-elle symbolique?* (1905); and *L'église de Saint-Philibert-de-Grandlieu* (1909). In 1902 he published his admirable *Études sur la sculpture française au Moyen-âge* (Fondation Piot). His great work, *L'architecture religieuse en France à l'époque romane* (1912), the result of his life's research and teaching, may safely be pronounced to be the best work which has yet been written on its subject, and its literary style is as excellent as its matter. Before his death he had practically completed a companion book on Gothic architecture, which it is to be hoped may be published. His interests were by no means confined to archaeology. In 1893 he was elected deputy for the Corrèze, the department in which he had

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his country home, and he was for many years a director of the Chemin-de-Fer de l'Ouest. His fine character commanded the admiration of all who knew him, as was proved by the striking demonstration of respect at his funeral. Those who were privileged to enjoy his friendship will endorse the appreciation of him by M. André Michel—'l'homme, le gentilhomme complétait en lui l'érudit et le savant'.

J. B.

Reviews

The Arts in Early England. By G. BALDWIN BROWN, M.A., Professor of Fine Art, University of Edinburgh. Vol. v. The Ruthwell and Bewcastle Crosses, &c. $8\frac{3}{4} \times 3\frac{7}{8}$. Pp. 420. London: Murray. 1921.

This is an excellent new volume of an important series, sound and yet enthusiastic—a really patriotic piece of workmanship. The conclusion as to the recently disputed date of the two great Northumbrian crosses, that they are indeed works of the seventh century, is reached after a careful sifting of the evidence and in revision of Professor Baldwin Brown's own earlier view. A valuable examination of the runic inscriptions is included. Accepting gratefully all that is so generously given and clearly set out I pass to the discussion of a few details.

The traces of a coiled snake on the lower part of the old south side of the stem of the Ruthwell cross are passed over (p. 143). I have recently again examined these traces on the east at South Kensington in a good light, and were it not that Professor Brown does not see them, I would say that no one can doubt their existence when once pointed out. There are serpentine coils, and also a well-defined head. This head is in a frontal position and comes close to the top of this lower section of the side of the cross, directly under the root of the 'tree' of scrolling foliage which fills the rest of this side of the shaft. The close juxtaposition of the head of the serpent to the root of the 'tree' is so marked that I cannot doubt the relation was intended and should be taken into account in the explanation of the cross. When this is done the question of the archer and the eagle at which he shoots may be reconsidered.

It is doubted whether the traces of an important subject at the bottom of the west front can be interpreted as the Nativity (p. 135). Again, and after re-examination, I cannot doubt. I see, at the top of the panel, two quadrupeds with their heads facing one another, then below them a large form filling the space from side to side more or less like a couch, then below again a central symmetrical shape between two others—the Infant in a basin with the attendant women. Now the treatment of the two beasts is confirmed by, and explains, two similar animals, directly below the Crucifixion on the Sandbach Cross; the rest is lost but there, too, as the comparison shows, the Nativity was represented in a similar way.

CONTENTS OF VOL. I

	PAGE
Foreword ; by Sir Hercules Read, President	1
The Latin Monastic Buildings of the Church of the Holy Sepulchre at Jerusalem ; by A. W. Clapham, F.S.A.	3
The Excavations at Stonehenge ; by Lt.-Col. Hawley, F.S.A., with an appendix by C. R. Peers, Secretary	19
The Discovery of Silver at Traprain Law ; by A. O. Curle, F.S.A.	42
An Imperfect Irish Shrine ; by E. C. R. Armstrong, F.S.A.	48
John Plummer, Master of the Children ; by C. Johnson, F.S.A.	52
The Discoveries at Spiennes ; by M. Aimé Rutot, Hon. F.S.A.	54
A Coffin-Chalice from Westminster Abbey ; by Rev. H. F. Westlake, F.S.A.	56
The Discovery of Engravings upon Flint Crust at Grime's Graves, Norfolk ; by A. Leslie Armstrong, F.S.A. (Scot.)	81
Excavations at Frilford ; by L. H. Dudley Buxton, M.A.	87
Palaeolithic Implements found in Sweden, by Oscar Montelius, Hon. F.S.A.	98
On the Site of the Battle of Ethandun ; by E. A. Rawlence, F.S.A.	105
A reply to Mr. Rawlence's paper on the Battle of Ethandun ; by Albany F. Major, O.B.E.	118
An Irish Bronze Casting formerly preserved at Killua Castle, co. Westmeath ; by E. C. R. Armstrong, F.S.A.	122
Discoveries at Amesbury ; by Sir Lawrence Weaver, K.B.E., F.S.A.	125
Irish Gold Crescents ; by Reginald A. Smith, F.S.A.	131
Presidential Address : Museums in the Present and Future ; by Sir Hercules Read, LL.D., F.B.A.	167
Wayland's Smithy, Berkshire ; by C. R. Peers, Secretary, and Reginald A. Smith, F.S.A.	183
The Dorian Invasion reviewed in the light of some New Evidence ; by Stanley Casson, M.A.	199
Notes on Some English Alabaster Carvings ; by W. L. Hild- burgh, F.S.A.	222
Notes on Some Recent Excavations at Westminster Abbey ; by Rev. H. F. Westlake, F.S.A.	232

The description of the fine Crucifixion group (p. 141) is very short, and it is doubted whether the attendant figures can be identified. Comparison with the Crucifixion in the Durham book recently shown at South Kensington, and with several other representations, considered together with the profile of the forms, shows that the figures were the two soldiers. In the Durham book two angels occupy the upper angles of the space where in the relief were sun and moon. These angels are evidence as to the interpretation of the words in the poem, 'Eager ones came from far', which Professor Cook thought referred to Joseph and Nicodemus.

Professor Brown explains the lump against the left-hand margin of the panel containing the Flight to Egypt, as the rounded top of a tree—'a detail occurring in other representations of the subject'. This is true, but Joseph also frequently occurs, and as he is named in the inscription and some one is needed to lead the ass it seems reasonable to suppose that the rounded lump is Joseph's head. In some representations the party is entering the gate of a city: this I suppose may be represented by the margin of the panel, and that Joseph is supposed to be looking back as he passes through.

'It has been noticed (says Professor Brown) that the nimbus of the Ruthwell Christ is cruciferous while that at Bewcastle lacks this indication'. In the excellent photograph of the Bewcastle Christ given in Bishop Browne's pleasant volume on the Crosses, I thought I could see slight traces of indented lines forming a cross on the nimbus, and this point may be re-examined.

Professor Baldwin Brown restores the stone fragment found at Bewcastle in 1615, as a collar in a separate piece intervening between the shaft and head of the main cross. This is unsatisfactory: such construction with a tenon completely transfixing a thin stone is, at least, very unusual; no parallel to such a collar made of a separate small stone is known to me; finally the descriptions speak of the fragment as from 'the head of a cross'... 'the breadth at the upper end being 12 inches'. The supposition that it was part of a cross head four inches thick from back to front and inscribed like the fragment from Dewsbury in the British Museum seems best to agree with the evidence.

The 'Falconer' on the Bewcastle Cross is described as having a gauntlet, the bird 'is of the falcon kind' and the treatment is 'frankly secular'. However, the author supposes that the figure is not a portrait of Alchfrid but was 'really meant for St. John the Evangelist'. This summing up seems against the weight of the evidence. It is urged that both the Baptist and the Evangelist accompany Christ at Ruthwell, and the Evangelist is there 'unconventionally treated'. At Ruthwell the latter only appears as one of the four symbols of the Gospels: it is of small scale, and any unconventionality seems to come from the necessities of space filling. The Baptist appears at Ruthwell and Bewcastle bearing the Lamb on a disc, and thus testifying to the Christ who stands on two dragons. This is the Risen Christ triumphant over death and hell¹. (The Irish

¹ Compare the plaster cast from a Yorkshire cross in the British Museum which I suppose has the same meaning.

Two Relic-holders from Altars in the Nave of Rievaulx Abbey, Yorkshire; by C. R. Peers, M.A., Secretary	271
The Ancient Settlements at Harlyn Bay; by O. G. S. Crawford, B.A., F.S.A.	283
An English Fifteenth-century Panel; by H. Clifford Smith, M.A., F.S.A.	300
Further Observations on the Polygonal Type of Settlement in Britain; by Lt.-Col. J. B. P. Karslake, M.A., F.S.A.	303
A Neolithic Bowl and other objects from the Thames at Hedsor, near Cookham; by E. Neil Baynes, F.S.A.	316
Note on a Hoard of Iron Currency-Bars found on Worthy Down, Winchester; by Reginald W. Hooley, F.G.S.	321
Note on a Bronze Polycandelon found in Spain; by W. L. Hildburgh, F.S.A.	328
Notes	58, 140, 234, 338
Obituary Notices	76, 145, 242
Reviews	63, 146, 243, 347
Periodical Literature	70, 154, 253, 353
Bibliography	78, 162, 262, 363
Proceedings of the Society of Antiquaries	164, 264, 365
Index	367

Crosses had the Crucifixion on one side and the Judgement on the other). On the Ruthwell Cross the subject below the Risen Christ is that of the meeting of Paul and Anthony in the desert which stands for the institution of the Monastic Church. Above, on the arms of the cross, were the symbols of the four evangelists who doubtless surrounded the Lamb of the Apocalypse. The whole is a theological scheme. The subject-matter comprised the Birth, Life, Miracles, Crucifixion, Resurrection of Christ, the testimony of prophecy summed up by the Baptist, the foundation of Monasticism, and the Glory of the Lamb. It was a 'High' or teaching cross. The Bewcastle Cross, on the other hand, as Professor Baldwin Brown allows, was a memorial monument to Alchfrid. The coins show that the idea of 'portraiture' existed; the falcon was a badge of nobility, and it is here a symbol of princely rank (as Harold carries one on the Bayeux embroidery); directly over this figure with the falcon is the memorial inscription which names Alchfrid. It is quite impossible for me to suppose that the 'Falconer' is the Evangelist John rather than the prince of Northumbria. (Professor Cook raised objections to the falconer on chronological grounds, but see references in Sidonius).

I do not get any very clear impression of Professor Baldwin Brown's conclusions as to the art sources and affinities of the Northumbrian monuments. In one place he says (p. 391) 'motives would not be conveyed by aeroplane from Syria or Italy to Britain and dropped ready made at the feet of Irish scribes, but would be slowly diffused leaving traces wherever they passed'. In another place he allows of the sculpture that 'the figures are not Roman in type but Greek . . . the attitude of Mary in the Annunciation is . . . oriental of . . . the Syro-Palestinian type. . . . No direct early connexion between this (Northumberland) region and the Hellenistic East can be proved but the possibility of such a connexion is obvious'. Again, in another place, he argues for the native development of the foliage patterns from Roman stones and 'Samian' pottery. For myself I see a strong Coptic influence in the whole school of art. Take the Annunciation mentioned above: I do not know why it should be called Syro-Palestinian. Illustrated by Venturi is an early ivory, closely akin to the St. Mark's series, on which the two figures are standing as on the Ruthwell Cross. On the ivory the development of this type is explained; the Virgin had been spinning at the door of the dwelling but rose as the Angel approached: this type was, I believe, of Egyptian origin. Again, the Visitation on the same Cross is treated exactly as on a piece of Christian embroidery from Egypt in the Victoria and Albert Museum. I suppose the existence of a native school of art working from eastern models and illuminated books under the direction of eastern teachers would best explain the facts.

Professor Baldwin Brown questions whether Cuthbert's Cross and his little silver altar were English work; and the Ormside bowl is also given away. Of the cross it is allowed that the bosses in the re-entering angles are similar to others found on the Irish stone crosses and this, having regard to the general relationship of Irish and Northumbrian art, is strong evidence for the Northumbrian origin of the panel, and I may point out that the step patterns used as space fillings in

LIST OF ILLUSTRATIONS

	PAGE
Plan of the Church and Priory of the Holy Sepulchre, Jerusalem	
<i>Plate facing</i>	3
The Holy Sepulchre: original form and grouping of the buildings	5
The Holy Sepulchre of 614-1009, as restored by Modestus	7
The Holy Sepulchre of 1048-1100, as restored by Constantine	
Monomachus	9
Stonehenge in 1894	<i>Plate facing</i> 19
Stonehenge: position of stones 6 and 7 and of lintel before excavation was begun	21
Stonehenge: section through stone 7 looking N.E.: stone 6 in the background	23
Stonehenge: section through stones 6 and 7 after excavation, looking east: post-hole on right	26
Stonehenge section through stone 6, looking N.E.	27
Stonehenge stones 6 and 7, showing packing blocks and post-holes	28
Stonehenge Aubrey hole 21	31
Stonehenge Aubrey holes 16 and 13	32
Stonehenge Aubrey holes 3, 5, and 19	33
Stonehenge Sections through rampart and ditch	35
Stonehenge Sections through Slaughter Stone	37
Stonehenge Lintel ready for lifting: lintel being lowered	<i>Plate facing</i> 38
Stonehenge Straightening stone 6 by means of jacks	<i>Plate facing</i> 39
Traprain Law (Haddington): Treasure in the condition in which it was discovered	43
Traprain Law: Small triangular bowl with beaded edge	43
Traprain Law: Portion of flagon depicting the Adoration	44
Traprain Law: Silver spoons	45
Traprain Law: Some of the Teutonic ornaments	46
The Killua shrine, front and back	<i>Plate facing</i> 48
Side of Killua shrine, to show handle	48
Fragments supposed to have formed part of the Killua shrine	51
Pewter coffin-chalice and paten from Westminster Abbey	57
Engravings on flint crust from Grime's Graves, Norfolk	83

the Lindisfarne book and elsewhere are evidently derived from the inlaid work of such jewels as the Cross.

Of the portable altar it is remarked that 'the foliage in the corners resembles the palmette forms of Hellenistic acanthus ornament . . . parallels can be found in Merovingian and allied MSS. . . . The piece may therefore be of Gallic origin which is conceivable too in the case of the pectoral cross. Neither piece looks like Anglian work'. Now the ornament in question closely resembles that on the binding of St. Cuthbert's Gospel book, and this binding is shown to be English by its association with the text, and by having step patterns and interlacings closely like those of the Lindisfarne book.

Of the Ormside bowl we are told—'the work is not in the writer's opinion a production of this country but of Merovingian Gaul'. It is allowed, however, that 'it can certainly be ascribed to the middle or latter part of the seventh century'. Now this was the high moment of Northumbrian art. Further 'its immediate provenance may have been some monastery perhaps in Northumbria'. Again, 'the repoussé work is as Hellenistic as the best of the figure-work of the crosses'. Of late seventh-century work, resembling the crosses and belonging to a Northumbrian monastery; why then should it not be native work? Again, the Northumbrian school was famous for work in the precious metals—would it not be a remarkable coincidence if the only three pieces of such work found in the district should all be Merovingian? The main scheme of ornamentation is a fourfold arrangement of a plant springing vertically, and birds in symmetrically placed pairs. The plants are a more elaborate version of that on St. Cuthbert's Gospel, and the birds may be compared with those on Cuniborough's stone at Peterborough. The interlacing ornament of the bowl is very like that on the head of the stone cross at Irton. The Ormside bowl must also be compared with two silver cups in the British Museum, one of which was found on Halton Moor. Altogether, I believe, the weight of evidence still requires us to accept the British authorship of these works.

The description of the Lindisfarne book is excellent, and the non-Celtic elements are well brought out. On this I may again mention the origin of the step patterns in inlaid Teutonic metal work. As to what is really 'Teutonic' in such art see Emile Mâle's recent little book. What is called by Sir Maunde Thompson and others gold writing at the head of each Gospel is rather, I think, *silver*. Compare the use of silver as well as gold on Cuthbert's bookbinding. I have not seen it noticed how closely the Anglo-Celtic handwriting resembles in general appearance, roundness and spacing the Egypto-Greek hands of the fourth to sixth centuries. Note, too, the curious interchange of B for V in 'Natibitate' on the Ruthwell cross. It occurs, also, on one of the drawings of the Codex Amiatinus, and Westwood mentions other instances. Much of high interest regarding that wonderful poem, *The Dream of the Holy Rood*, is contained in this admirable volume. The authorship of Caedmon is, however, doubted. On this long ago it occurred to me—Is it not probable that when Bede tells that it was Caedmon's habit to dream his poems that the story arose from the form in which the Rood poem itself is cast? Or should we suppose

Frilford, Berks: sketch-map showing position of Romano-British cemetery	88
Frilford: plan of the cemetery	89
Frilford: part of the contents of grave no. 11	93
Palaeolithic flint implements: Scania	100
Flint implement of Solutré period: France	101
Spear-head of flint: Denmark	102
Spear-heads of flint: Solutré period: France	102
Small flint flakes (microliths): Mentone	103
Spear-head of bone with flint flakes inserted: Sweden	103
Flint implement, Campigny period: France	103
Flint implement: Sweden	103
Sketch-map of the district covered by the campaign of Alfred the Great, 877-8	106
Map of the district round Bratton Castle (Wilts.)	116
Irish bronze casting, from Killua Castle (co. Westmeath)	122
Details of the Killua bronze casting	123
Perforated stone axe-hammers found at Amesbury (Wilts.), Datchet (Bucks.), Standlow (Derbyshire), and Bulford (Wilts.)	127
Stone axe-hammers found at East Kennet (Wilts.) and Bardwell (Suffolk)	128
Copper axe-hammer found in Norway	129
Irish gold crescent belonging to the Drapers' Company	132
Irish gold crescent belonging to the Royal Institution of Cornwall	133
Stone and pottery crescents from Swiss lake dwellings	135
Leaves of the mistletoe	137
Bronze from a barrow at Wilsford (Wilts.)	137
Aubrey's sketch of Wayland's Smithy (Berks.), about 1670	185
Two iron currency-bars from Wayland's Smithy	188
Plan of Wayland's Smithy, as far as at present ascertained	193
Wayland's Smithy: sections, showing revetment and facing slabs	194
Bronze figures of horses and birds, from various sites in Greece	203
Sketch-map of Greece, showing sites of excavations	205
Groups of objects from Kalindoia <i>Plates facing</i>	210, 211
Sword from Kalindoia	211
Alabaster table of the Ascension	226
Alabaster table of the Consecration of an Archbishop	228
Alabaster tables depicting (a) Christ before Pilate, (b) Christ bearing His cross, (c) the Deposition, (d) the Entombment	<i>Plate facing</i> 228

that the story about Caedmon is literally true and that the maker of the Rood poem professed to compose in the same way? or did he dream too? or, again, is the resemblance mere coincidence? The first supposition seems to me the most likely, and to strengthen the probabilities that we have on the Ruthwell cross a contemporary text of a poem by Caedmon.

Standing crosses must, I think, have been distributed widely over Christendom (see Strzygowski's recent book on Armenia). On some of the early gilt-glasses figured by Garrucci pillars are shown supporting the XP monogram in a circle, and it may be recalled that in one or more cases where the monogram in a circle is *incised* on a stone in England there is a stem or support below the circle. Such standard monograms earlier than crosses proper would well explain the prevalence and persistence of wheel-crosses.

May I just say in conclusion that it seems to have been part of Professor Brown's plan to adopt what he could approve from other students without recording the origin of every suggestion? Thus of the restoration of the cross head with the Lamb in the midst and symbols of the four Evangelists around—On the top he says was St. John with the eagle; below are two figures, one winged, the other long-haired, holding a book: 'there is little doubt that the two figures represent Matthew and the Angel . . . and we could safely postulate St. Luke and St. Mark on the two ends with the *Agnus Dei* or other symbol of Christ in the centre' (p. 124). Now this has been noticed before, and I think it might even have added to the interest of this fine book to have included in it systematic references to the work of earlier students. However, it is only a question of method, and there was probably a need for compression.¹ W. R. LETHABY.

Traits d'union normands avec l'Angleterre avant, pendant et après la Révolution. By PAUL YVON. Caen and London: Dulau. 9 × 5½.

Pp. 374. 18 frs.

The connexion between Normandy and this country has at all times been very close. Based on geographical proximity, history has strengthened the link; William of Normandy brought and Louis XIV sent many Normans to England, and in each case these became an integral part of the English nation; while the Revolution led many *émigrés* temporarily to our shores.

It is not, however, the purpose of the author of this work to consider these relations, which belong indeed to history; but he has traced out in detail another link in the chain, namely the literary sympathies which arose in the latter half of the eighteenth century. The question, of course, is far from being a provincial one, and might well be studied as part of the general history of France at that period; dealing, however, only with Normandy, our author is able to treat the local manifestations of these sympathies in great detail.

Normandy, partly from racial and partly from religious reasons, has ever been in the forefront of intellect in France, and we are not

¹ On the origin of Runes, see Professor Flinders Petrie's recent volume on the Alphabet. Another account of the Ruthwell cross has just been published in the seventh report on the historic monuments of Scotland, County of Dumfries.

LIST OF ILLUSTRATIONS

vii

PAGE

Alabaster images of St. Christopher	<i>Plate facing</i>	229
Marks on alabaster tables		229
Alabaster table of SS. James and John		230
Plan of the sub-vault of the Misericorde, Westminster Abbey		233
A Gloucester palaeolith		234
Roman altar in Scilly		239
Rievaulx Abbey: plan of first church, showing 14th century alterations in nave		273
Leadern relic holders and earthenware pot from Rievaulx Abbey		280
Map of Harlyn Bay and neighbourhood		285
Hammer-stone from Constantine Island (Cornwall)		287
Fragments of urn found near Bloodhound Cove, Harlyn Bay		289
Fragment of urn, 'incense cup', bronze dagger, spindle-whorl, and slate sharpener: found near Bloodhound Cove, Harlyn Bay		291
Clay vessel found near Trevoise Head (?) (Cornwall)		292
Axe-hammer found near Trevoise Head (?)		293
Cinerary urn found on Cataclews Cliff (Cornwall)		293
Spindle-whorl found near Trevoise Head		298
Fifteenth-century panel of the Annunciation	<i>Plate facing</i>	300
Camps of polygonal type		305, 308
Neolithic bowl from the Thames		317
Wax impression made from side of neolithic bowl		318
Currency-bars from Worthy Down, Winchester		323
Bronze <i>polycandelon</i> found in Spain		329
Bronze <i>polycandela</i> in the Granada Museum, Spain		333
Bronze fragment from Spain		336

surprised to find an 'Académie' existing in Rouen around which gathered the best local literary talent. Many questions interested them, not least among these being contemporary English literature. This interest showed itself largely in translations of our authors, of whom Pope seems to have been the favourite. The English sympathies of some of these translators were deeper than their knowledge of the language they translated; indeed, many of the efforts crowned by the Academy were, as Mr. Yvon admits and illustrates, rather adaptations than translations.

The emigration due to the Revolution was the cause of a much closer *rapprochement* between the two lands, and this owing to the special interests of some of the *émigrés*. England and Normandy hold their early history in common, and the documents which serve to illustrate this are found in both lands. It chanced that two Normans—Moysant and de la Rue—who sought shelter with us were specially interested in these questions. Bringing with them a considerable knowledge, they found ample material in our archives with which to increase that knowledge. The condition of our records was in those days chaotic, but what could be done to assist their research was done by our Society, which helped and encouraged the two students in every way, recognizing the value of their work not only by printing their communications in *Archæologia*, but also in electing them as Honorary Fellows. One is pleased to think that this manifestation of scholarly sympathy met with reward, for when, at a later date, Stothard was commissioned by our Society to make his copy of the Bayeux tapestry, his labour was greatly facilitated by the gratitude of de la Rue.

We congratulate Monsieur Yvon on having revived in so capable a manner this special link between the Society of Antiquaries and his own land. Forged on the anvil of a common history and of common studies, it will serve to strengthen the *entente* which now binds the two countries.

W. MINET.

Selections from the Paston Letters. Edited by ALICE D. GREENWOOD. London, 1920. G. Bell & Sons. 7 $\frac{3}{4}$ × 5 $\frac{1}{2}$. Pp. xlii + 492.

Miss Greenwood has compiled this volume in the belief that many readers might enjoy an acquaintance with the Pastons who have not time to grapple with their entire correspondence. She has accordingly given the *Letters* in the 'modernized' version of Sir John Fenn, their first editor. There can be no question that fifteenth-century English letters lose much of their savour by being modernized, and the difficulties of the language are more apparent than real. Still there are no doubt some to whom the *Letters* will appeal more readily in a modern dress, and the Paston *Letters* give, of course, an unrivalled picture of social life. But they are very far from standing alone; and if the aim is to give simply for ordinary readers a picture of the times, the purpose would have been better served by extending the selection to include letters from other sources. However, within its scope Miss Greenwood's volume will prove interesting to those for whom it is intended, and she has, on the whole, done her work as editor well. There is a good series of genealogical tables, and a useful sketch-map

of the Paston country in Norfolk; the lack of such a map is a real defect in Gairdner's monumental edition. The notes alone perhaps leave something to be desired. Many have been adopted from Fenn, whose knowledge and understanding on such points as the law, agriculture, land customs, heraldry, or geography were, Miss Greenwood argues, more direct than could be the case with modern scholars. The proposition is one which it might be difficult to maintain; one of the few explanations given of a law term comes from Fenn, who clearly took it, as any modern scholar might do, from Jacob's *Law Dictionary*. Others of Fenn's notes might easily have been improved by a little research. It is not helpful to be told that the Mews (p. 85) are now the Royal Stables; but to know that they were on the site of Trafalgar Square would have been. The Lady Harcourt referred to on p. 412 was not, as Fenn conjectured, the widow of Sir Robert Harcourt, but the wife of Sir Richard; she had previously been the wife of Sir Miles Stapleton, hence her association with the Pastons. The 'well with two buckets' was not, as Miss Greenwood supposes on p. 320, an inn, but a well-known object at the corner of Threadneedle Street, by the church of St. Martin Outwich. C. L. KINGSFORD.

Anglo-Saxon Coins found in Finland. By C. A. NORDMAN. The Finnish Archaeological Society, Helsingfors, 1921. 12 $\frac{3}{4}$ x 10; 93 pp., with two plates.

This is a very useful, painstaking, and scholarly study, completing the work begun by O. Alcenius. The regular import of English coins into Scandinavia begins, as is well known, towards the end of the tenth century, just at the time when the supply of Arabic coins fell off—a significant fact for the history of trade. The earliest English coin found in Finland itself is a solitary York penny of Edward II, the Martyr. Of Aethelred II, Mr. Nordman records 443 specimens; of Cnut the Great, 286; of Harold I, seven; of Edward Confessor, twelve; of the two Williams, five; also seventeen Irish coins. The find-spots are bunched together in the older civilized districts in the south-west of Finland; but isolated finds have occurred in spots so remote as Kuolajärvi in Lapland, or Kronoborg on Lake Ladoga. The most surprising fact, indicating a complete change in the course of trade, is that Åland, on which many more Arabic coins have been found than on the mainland, has produced no hoards of English.

Numismatists will be interested in the author's analysis of the bearing of the finds on the vexed question of the chronology of Aethelred's types. The relative sequence, according to him, is: Small Cross (limited issue); Hand; Crux; Long Cross; Radiate Helmet; Small Cross (main issue); Agnus Dei. But he admits that the recently published Chester find makes it probable that the first issue of the Small Cross type was not so limited as he had previously supposed.

G. F. HILL.

F. Haverfield 1860-1919. By DR. GEORGE MACDONALD. 9 $\frac{3}{4}$ x 6. Pp. 17. Milford, for the British Academy. 2s.

Dr. Macdonald has given us an appreciative memoir of Francis John Haverfield, his friend and fellow-student of Roman archaeology. He

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Foreword

THE present volume represents a new departure in the history of the Society of Antiquaries, and will, it is hoped, not only be found more useful by the Fellows, but enlist the interest and support of the general public in touch with antiquarian matters. A good many years ago I advocated an extension of our *Proceedings* on lines of this kind, but the conditions of the time were not favourable, and it was found to be impossible then to make any useful change. Now, however, when so many of our cherished traditions must perforce be abandoned, the opportunity has been seized to supplement changes arising from necessity with others tending to the advantage of the Society and of our studies. Our *Proceedings* have up to the present time contained only such matter as the title indicates; a bare record of events, some of the papers read at our meetings, and, for the last sixteen years, the discussions that followed. The resulting volumes have been of undoubted interest, and from the great variety of the matter it is probable that *Proceedings* have been more read and consulted than *Archaeologia*.

The Council, however, has felt that the Society might reasonably demand more from its officers than this merely domestic chronicle. The disappearance of one journal after another that had for years supplied information on antiquarian matters is another reason for the present undertaking. Moreover, the changes impending in the methods and constitution of the Society itself will call for a corresponding adaptation of our publications to the needs of our new environment; and these changes are of a nature to enlist the support of the outside public, a point to be considered when our normal expenditure is apt to exceed our income.

The present volume will contain all the matter found in its predecessors, but it will go much further, and an effort will be

traces the Haverfields to the Mendips and the Quantocks through generations of botanists, soldiers, and parsons. Haverfield's grandmother was a daughter of Jeremiah Meyer, the Würtemberg designer of the bust of George III for the coinage of 1761 and an original member of the Royal Academy, and his mother, Emily Mackarness, was the sister of two bishops. From this descent we can perhaps trace some of Haverfield's characteristics, modified or developed during his career as a scholar of Winchester and of New College, as a schoolmaster at Lancing, as censor of Christchurch, and lastly as Camden Professor of Ancient History. We can see the exactness of the scientist, the precision of the soldier, and the high purpose of the ecclesiastic in his work. In his extreme conscientiousness he grudged no labour in order to obtain accuracy, and as a consequence his work progressed slowly. His articles were typed, revised, and typed again perhaps three or four times before his fastidious taste was even tolerably satisfied. After that, as Dr. Macdonald tells us, the final fair copy was further revised 'until every unnecessary word had been erased, each phrase adjusted to its proper order'. With so much pains a somewhat laboured style might be expected, but on the contrary few could express themselves more clearly and easily. His ever ready help to a good cause and encouragement for every deserving endeavour brought him numerous friends. The pleasure it was to him to draw together those who were likely to be helpful to each other in their work will be in the memory of many. 'Whom would you like to meet?' was his invariable question, as Dr. Macdonald reminds us, when a week-end invitation was accepted.

But Dr. Macdonald, like a good biographer, does not ignore the shortcomings of his friend, although by his kindly treatment of them they only go to emphasize the more numerous good qualities. He points out that Haverfield was not made for team work; 'he was no respecter of persons and he was too impatient of the unessential, not quite ready enough to compromise or to suffer gladly those whose vision seemed to him less acute than his own.' The fact is, perhaps, that he never completely threw off the habits of a schoolmaster and criticized the work of mature Oxford dons and others as he would correct a school essay. To those who were without pride his candour was of the utmost help and value, but to others by whom his outspoken methods were not understood it was the cause of heart-burnings. But the candour meant no ill will on his part, he would spend infinite time and trouble to show those whom he had so candidly criticized, or any others, how to do better. Although his studies covered the whole field of classical scholarship, it is as an epigraphist and student of Romano-British archaeology that he will be remembered. Yet it was his knowledge of the classical writers which enabled him to extract the uttermost ounce of historical fact from the archaeological remains of the period he had made his own. The power of collecting and assimilating all that was being done in the field of Roman archaeology was marvellous, and for many years, as a friend expressed it, 'he was the clearing house for Roman Britain'. His principal interest lay, perhaps, with the explorations along the Roman wall and particularly with the excavations at Corbridge, where he spent many of his

made to furnish an adequate record of archaeological discovery within the limits of the Society's activity. We contemplate relations of a more intimate kind with the principal societies of the Continent, whose activities will be noted; and the simpler task of recording the archaeological progress of our own country will be our first charge. In this way the *Antiquaries Journal* will aim at providing a chronicle which may remove the reproach of insularity so often launched at us.

Another side of the work will deal with the literature in the wide field of archaeology. Each quarterly number will contain reviews of current archaeological works which will not of necessity be critical, but will give such information as will enable the reader to judge of the character of any work and of its utility to himself.

The programme outlined above will mean a considerable change in our habits, and a great deal of unpaid work in novel directions. The Council hopes that at this stage the Fellows will be charitable in their judgements, and will remember also that it is the duty of every Fellow to help when he sees an opportunity of doing so. A Society that may be said to date from the time of Elizabeth is called upon to reform itself, and pursue its unaltered aims in the spirit and method of this period of reconstruction. Finally, there is the business aspect, which will become more and more important; and the Fellows, who will continue to receive *Archaeologia* as well as the *Journal* in place of *Proceedings*, are asked to spread the knowledge of our venture among those likely to be interested.

Soc. Antiq. Lond.,
Dec. 1920.

C. HERCULES READ,
President.

vacations. The chief outcome of his studies is probably the essay on 'The Romanization of Roman Britain' which originally appeared in the Proceedings of the British Academy in 1906, but the Bibliography of his works prepared by Dr. Macdonald for the *Journal of Roman Studies* is long and varied. Dr. Macdonald's memoir is a model of what such a work should be. Those whose lives and works deserve to be remembered may be well content if they can feel assured that the record of their deeds shall be written by a friend no less competent, truthful, and sympathetic.

WILLIAM PAGE.

Ruskenesset: en stenalders jagtplass, av AUG. BRINKMANN og HAAKON SHETELIG (*Norske Oldfund: Aethandlinger utgit av det norske arkeologiske Selskap*, Kristiania, 1920).

At the head of Mathop Fjord, south of Bergen, two habitation-sites (Ruskenesset I and II) were discovered in 1914-15, nearly sixty yards apart at the foot of a cliff, and were excavated by our Hon. Fellow Dr. Shetelig and his assistant. They are now twenty-six feet above the sea, but were probably separated during their occupation by the sea reaching the cliff between them; and were therefore suitable for people living partly on shell-fish. Owing to exceptional protection from the weather a rich fauna was recovered, including the red deer, ox, sheep, and pig, but only one bone of the dog, and that probably not contemporary. An examination of the bones suggests that the two sites were not in continuous occupation, but frequented only on hunting and fishing expeditions; and they were besides screened from the sun, facing due north. Bones of three adults and a child were also found, the last apparently not belonging to a burial, and the rest being very imperfect. The teeth showed an unusual amount of wear. Five plates of the objects give an adequate idea of the culture, and include greenstone and other celts, flint daggers and arrow-heads (mostly triangular), scrapers, strike-a-lights, and pottery. One of the pumice-stone specimens has a longitudinal groove and looks like an arrow-shaft smother; but the main industry was in bone, with harpoons, fish-hooks, and borers preponderating. The whole series closely corresponds to South Scandinavian finds of the Dagger period about 2000 B.C., when chambered barrows were passing out of fashion and the dead were commonly deposited in stone cists. More precision will no doubt be attained before long, but it is greatly to the credit of Scandinavian archaeology that neolithic chronology has already been placed on a satisfactory basis; and this report on what might well have been passed over as unimportant by any one but an expert reaches the high standard so jealously maintained by our neighbours across the North Sea.

REGINALD A. SMITH

Esquisse d'une monographie des couches quaternaires visibles dans l'exploitation de la Société des carrières du Hainaut à Soignies, par A. RUTOT (Bruxelles, 1920, extrait des *Mémoires publiés par l'Académie royale de Belgique*, IV).

This treatise was written in 1913 but was revised in accordance with the late Professor Commont's scheme, which is found to apply to Belgium as well as to the Somme valley. It contains diagrams and

descriptions of a number of sections belonging to the geological divisions known as Moséen, Campinien (not Campignien), and Hesbayen. The last dates from Le Moustier times and corresponds to the lower Ergeron of the Somme; above this, the Brabantien is equated with the middle Ergeron; and finally the Flandrien, comprising the brick-earth and Ergeron of Belgium, is contemporary with the upper Ergeron of Northern France, the closing phase of the Pleistocene. Near the base of the Hesbayen is found *Canis familiaris*, sometimes said to date only from the Danish shell-mounds; and the fauna discovered in the peaty pockets of the Campinien points to cold conditions, whereas in the corresponding deposits of the Somme valley—the middle loam, with St. Acheul industry—there is a warm fauna followed by the mammoth and its associates, heralds of a great glaciation. In the upper part of the Hesbayen were found a circular (tortoise) core and a hand-axe, both of Le Moustier character; more cores of the same type, and several points, blade-implements, and a single small ovate hand-axe occurred on the next level below; and lower down, near the base of the Hesbayen, Levallois and other flakes, one at least with faceted butt, and various cores, including an oblong $2\frac{3}{4} \times 2\frac{1}{2}$ in. from which blades have been detached longitudinally on one face and transversely on the other, an exact parallel to a common Grime's Graves type (*Report*, fig. 60). Notable also from this level are round scrapers on short broad blades; a pointed implement with flat and conical faces; an ovate and part of a triangular hand-axe. The flint finds indicate working-floors rather than occupation sites in the period of Le Moustier. M. Rutot here lays down the lines on which the Pleistocene of Belgium may be systematized, and is fortunate in being able to furnish for the Soignies pits lists of the plants and trees, mammals, molluscs, and insects, besides many detailed sections, and illustrations of the implements. Professor Commont's conclusions are found to be valid in Belgium, and the time is surely coming when they will be crucially tested in England. Under such auspices, the palaeolithic sequence in north-west Europe must soon be put beyond question. REGINALD A. SMITH.

A descriptive account of Roman pottery sites at Sloden and Black Heath Meadow, Linwood, New Forest. with plans and illustrations. By HEYWOOD SUMNER, F.S.A. $8\frac{3}{4} \times 5\frac{1}{2}$. Pp. 45. London, Chiswick Press, 1921. 3s. 6d.

Since 1853 when an illustrated report appeared in *Archaeologia*, xxxv, the existence of Roman pottery kilns in the New Forest has been recognized, but their exact date was never established. Recent excavations have rather complicated the question without affording chronological exactitude; but Mr. Sumner's new companion to the Ashley Rails volume published in 1919 is not only a charming addition to the literature of the subject, but brings us a stage nearer the desired result. His drawings of the potsherds (for whole vessels are rare) are all to the scale of one-third, with solid black half-sections in the modern diagrammatic style; but their severity is redeemed by a frontispiece representing phantom pack-animals being led through

of Olives. In addition to these there was the cathedral church and convent of the Nativity at Bethlehem. Comparing this list with that of other orders, we find the Benedictines holding the abbey of Jehoshaphat with the Virgin's tomb attached, and for a time at least the church of St. Mary Latin; nuns of the same order were established at St. Anne's and at Bethany, while a Premonstratensian abbey occupied the summit of Mount Joy or Nebi Samwil and enclosed that prophet's tomb.

The architectural history of the church of the Holy Sepulchre and the adjoining sites may be divided into six main periods, namely: first, from the foundation by Constantine the Great to the destruction by the Persians (336-614); second, from the restoration by Modestus to the destruction by the Caliph Hakim (620-1009); third, from the restoration by Constantine Monomachus to the Latin conquest (1048-1099); fourth, the period of the Latin kingdom (1099-1187); fifth, from the conquest by Saladin to the great fire of 1808; and sixth, from that date to the present day.

Under Constantine the Great two great churches were raised, one subsequently known as the Martyrium and later still as Mar Constantine, standing to the east and of the basilican form; and one called the Anastasis to the west, circular in form and enclosing the Holy Sepulchre. The original form and grouping of these buildings with the subsidiary structures surrounding them is shown on the plan (fig. 1'), though the details of the Martyrium are more or less conjectural. Of the actual structure there remains to-day a large part of the base of the circular outer wall of the Anastasis and the south-east angle with the jambs of two out of three of the doorways opening into the vestibule of the Martyrium, together with two or more columns of the colonnade in front. All the remaining walls display internally the mortises by which the former marble casing was attached to the stonework. These buildings were consecrated in about 336 and remained intact until the capture of the city by the Persians under Chosroes II, when the Holy Places were burnt, but apparently not systematically destroyed, on 4th May 614. On the withdrawal of the Persians, consequent on the victories of Heraclius, the buildings were restored more or less to their original state by Modestus, Hegumenos of St. Theodosius. It was probably at

¹ The plans, figs. 1, 2, 3, are reproduced from the work of PP. Vincent and Abel and are reconstructions for which those authors are responsible. Though the detail is, of course, often conjectural, they may be taken to represent with sufficient accuracy the general lay-out of the buildings on the site at the various dates shown on them.

the forest glades with products of the local kilns; while a map of the sites and the section of a kiln being fired are full of life and interest.

Most antiquaries associate with the New Forest kilns a hard, reddish-brown stoneware with metallic lustre, or a softer black-coated ware with decoration in white slip, both well represented in the British Museum; but of recent years very little of these wares has been found at the kilns, though recognized, sometimes far afield, in collections from occupied sites. Mr. Sumner mentions a few small pieces of this 'red-purple gloss ware' from the sites now described, but the bulk is surprisingly heterogeneous for a manufacturing centre which was presumably supplied for the most part with the local clay. On the other hand, only two fragments of Samian ware are mentioned; and the imitation of Gaulish pottery was coming to an end. On previous occasions a few coins (A.D. 117-378) have been found, but there is no further assistance from that quarter, and perhaps the best index of date is the series of lip-sections of mortaria. These evidently just preceded the hammer-head type; and if, as the author suggests, the Sloden and Black Heath Meadow kilns are earlier than Crock Hill, Islands Thorns, and Ashley Rails, which represent 'the culmination of prosperous settlement and of pottery production, A.D. 250-350', then the present volume may well picture for us the state of things in the first half of the third century.

Concentric marks on the base of pots at Old Sloden, and there alone in the Forest, were caused by a string of sinew pulled towards the potter in removing the vessel from the turn-table; but this can hardly have been done, as stated, during rotation. Figs. 4-8 on plate iv seem to be urns or vases rather than bowls as described; but the main purpose of the book is to illustrate and explain the kilns, and these were evidently excavated with extreme care in spite of various hindrances. Fragments capable of restoration as well as a type-series of the rest have been generously presented to the British Museum; and it would be a satisfaction to exhibit the Roman pony-shoes from Crock Hill and Ashley Rails, as datable objects of that class are always in demand, but almost unobtainable.

REGINALD A. SMITH.

Periodical Literature

The English Historical Review, April 1921, contains articles on the genealogy of the early West Saxon kings, by Mr. G. H. Wheeler; on the war finances of Henry V and the Duke of Bedford, by Dr. R. A. Newhall, and on the Supercargo in the China Trade about the year 1700, by Dr. H. B. Morse. Among the Notes and Documents are contributions on 'Shire-House', and Castle Yard, by Dr. J. H. Round; on the etymology of 'Bay Salt', by Mr. J. A. Twemlow; on the Escheatrics, 1327-41, by Mr. S. T. Gibson; on the House of Commons and St. Stephen's Chapel, by Miss Winifred Jay; on an unpublished

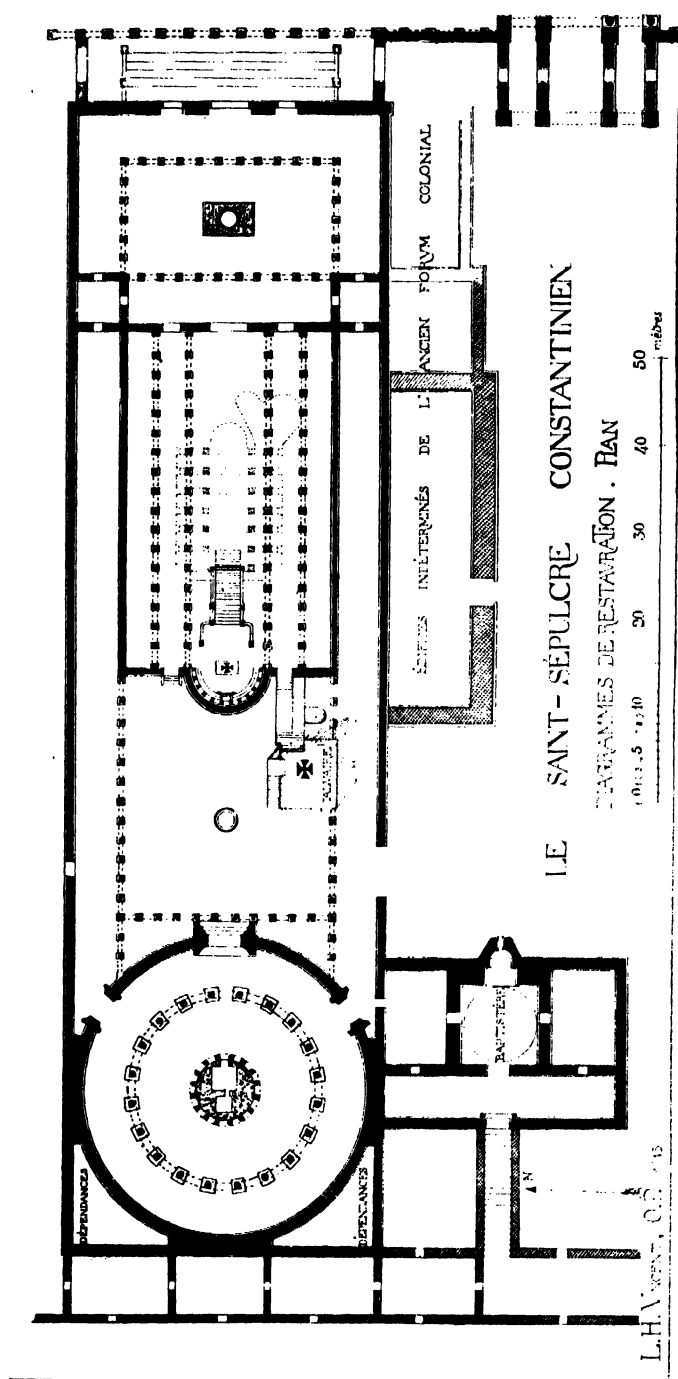


FIG. 1.
 Reproduced from 'Jerusalem' by PP. Vincent and Abel, by permission of the Librairie Lechevalier, publisher.

letter from Charles I to the Marquis of Ormonde, by Mr. Goddard H. Orpen; and on Lord Elgin's Report on Levantine affairs and Malta, 28th February 1803, by Dr. J. Holland Rose.

The Numismatic Chronicle, 1920, parts 3 and 4, contains articles on the 'restored' coins of Titus, Domitian, and Nerva, by Mr. H. Mattingley; on the Alexandrian Mint, A.D. 308-312, by Mr. P. H. Webb; on Italian Jettons, by Mr. F. P. Barnard; and on the inscription 'Pereric M' on coins of Matilda, by Mr. G. C. Brooke. The part also contains a general subject-index to volumes 11-20 of the *Chronicle*.

The Transactions of the St. Paul's Ecclesiological Society, vol. 8, part 5, contains the following papers:—Notes on the Zodiacal signs in connexion with the early Service Books of the Church, by Dr. W. de Gray Birch; Ewelme, by Rev. J. A. Dodd, with illustrations of the tomb of Alice, duchess of Suffolk; Church Graffiti, by Mr. R. L. Hine; on the Marian collects of thanksgiving for reconciliation with Rome, by Mr. F. C. Eeles.

The Associated Architectural Societies' Reports and Papers, vol. 35, part 1, contains the following papers:—Pluralism in the Medieval church: with notes on pluralists in the Diocese of Lincoln, 1366, by Mr. Hamilton Thompson; Masons' marks on Worcester Cathedral, by Mr. C. B. Shuttleworth; the date of building the present choir of Worcester Cathedral, by Canon Wilson; some early civic wills of Yorks., by the late Mr. R. B. Cook; old laws affecting trade, by Mr. W. R. Willis; and extracts from the *Curia Regis Rolls* relating to Leicestershire, A.D. 1232-69. There is also a plan of the recently uncovered foundations of the lost church of St. Mary's, Layerthorpe, Yorkshire.

The Transactions of the Exeter Diocesan Architectural and Archaeological Society, 3rd series, vol. 3, part 3, contains a survey of Devonshire churches, by Miss Beatrix Cresswell; illustrated notes on the alabasters from South Hurst Church, by Dr. Philip Nelson and Miss E. K. Prideaux; notes on carved bench-ends in Devon, by Miss K. M. Clarke; and an article on the chalice and paten as illustrated by the church plate of the archdeaconry of Barnstaple, by Rev. J. F. Chanter.

The Transactions of the Historic Society of Lancashire and Cheshire, vol. 71. Included in the volume are a descriptive account of Speke Hall, by Mr. H. Winstanley; a paper on Stanlaw Grange at Aigburth, by Mr. C. R. Hand; a note on a coffer, dated 1678, with the Stanley crest, by Mr. R. T. Bailey; and a paper on the recently discovered plans of old St. Nicholas's Church, Liverpool, by Mr. H. Pect. There are also communications on early plans of Liverpool; on Dame Mary Moore, by Mr. W. F. Irvine; on impressions of armorial seals of Cheshire gentry, made by Elias Ashmole in 1663, by Mr. J. P. Ryland; on Eaton, Cheshire, and Eaton, Bucks, by Mr. R. Stewart Brown; and on two medieval alabasters, by Dr. Philip Nelson.

In the *Transactions of the Lancashire and Cheshire Antiquarian Society*, vol. 37, the Rev. H. A. Hudson describes some old Manchester fonts; Mr. F. H. Cheetham continues his papers on the church bells of Lancashire; Mr. Clayton writes on Richard Wroe, warden of Christ's College, Manchester, from 1684 to 1717/18; Mr. G. R. Axon contributes a note on Gibraltar, a one-time picturesque courtyard in

this time that the three and possibly four apses were added to the Anastasis, of which the lower parts of those on the north, south, and west yet remain (fig. 2). These apses display, where they can be examined, a straight joint with the walls of Constantine, and are shown existing on the sketch plan of Arculph. At the Saracen conquest of 637 the buildings suffered little or no damage, and except for three renewals of the cupola and one of the roof of the Martyrium little was done to the structure in the eighth, ninth, and tenth centuries. About 935 a mosque was built in part of the vestibule of the Martyrium to commemorate the prayer of the Caliph Omar.

This period came to an end on 18th October 1099, when the Holy Places were completely destroyed by order of the Fatemite Caliph Hakim of Egypt. This destruction, according to contemporary Arab evidence, was carried out to the foundations, 'except where it proved too difficult'.

After feeble attempts at partial repair, the restoration was taken in hand from funds supplied by the Byzantine Emperor Constantine Monomachus. The Anastasis was restored by 1048, and at the same time the four chapels flanking it, one on the north and three on the south, which still survive, were built, together with the existing or partly existing colonnades, on the north leading to the prison of Christ, and on the south bounding the parvis. No attempt was made to restore the Martyrium, except that the subterranean chapel of St. Helena was restored to use (fig. 3). These were briefly the more important buildings occupying the site when the Crusaders took the city on 15th July 1099.

Godfrey de Bouillon almost immediately introduced a chapter of twenty secular canons, to whom the church was entrusted, and in 1114 these canons were brought by the Patriarch Arnoul under the rule of St. Augustine, and the establishment became a priory of that order.

The new church must have been begun early in the twelfth century, and the scheme adopted was the bold one of including all the holy sites, with the Rock of Calvary itself, in one building. To this end the Anastasis was left standing except its eastern apse, and a large presbytery and transepts were built on, immediately to the east of it. The north transept was planned short in order to leave standing the Byzantine colonnade leading to the prison of Christ, and the south transept was planned long, to enable the whole of the Rock of Calvary to be included within it. The eastern arm is of the familiar apse and

¹ Yahia ibn Said, Vincent and Abel, *op. cit.*, ii, 246.

Manchester; and Mr. J. J. Phelps describes the pre-Norman cross at Cheadle.

Annals of Archaeology and Anthropology, University of Liverpool, vol. 8, no. 1, contains a report on the Oxford excavations in Nubia, 1910-13, by Mr. F. Ll. Griffith; a note on a fibula of Cypriote type from Rhodes, by Professor J. L. Myres; and a paper on Pheidippides; a study of good form in fifth-century Athens, by Dr. W. R. Halliday.

Vol. 8, no. 2, of the same periodical contains the final portion of Dr. Halliday's paper on Pheidippides; a paper by Mr. R. Newstead on the Roman cemetery in the Infirmary field, Chester; and an article by Professor Garstang on the organization of archaeological research in Palestine.

The Transactions of the Leicestershire Archaeological Society, vol. 11, parts 7 and 8, in addition to an obituary notice of the late Mr. Samuel Perkins Pick, contains a paper by Messrs. George Farnham and Hamilton Thompson on the Manors of Allexton, Appleby, and Ashby Folville.

Norfolk Archaeology, vol. 20, part 3, contains a life of Robert Baron, of Norwich, by Mr. F. R. Beccano, on the Rockland St. Andrew communion cup and the Drayton communion cup, by Mr. J. H. F. Walter; on church plate in the deanery of Blofield, by Rev. E. C. Hopper; and on the Anglo-Danish village community of Martham, by Rev. W. Hudson.

Archæologia Acliana, 3rd series, vol. 17, contains a third edition of the catalogue of the inscribed sculptured stones of the Roman era in possession of the Society of Antiquaries of Newcastle-upon-Tyne; Professor Bosanquet contributes an appreciative notice of the late Professor Haverfield; Mr. James Hodgson writes on Thomas Slack, of Newcastle, printer 1723-84, founder of the *Newcastle Chronicle*; and Dr. R. B. Hepple on Uthred of Boldon, a fourteenth-century ecclesiastic and prior of Finchale. The ancestry of John Hodgson Hinde is discussed by Mr. J. C. Hodgson; Mr. Hamilton Thompson gives a summary account of the Clervaux Chartulary with abstracts of the deeds relating to the property of the Clervaux family in the county palatine of Durham; an account of the family of Dagnia, glassmakers, of Newcastle and South Shields, is contributed by Mr. H. M. Wood; Mr. Hunter Blair writes a note upon medieval seals with special reference to those in the Durham Treasury, which serves as an introduction to his catalogue of the Durham seals completed in vol. 16; and Mr. W. H. Knowles publishes an article on the monastery of the Black Friars, Newcastle-upon-Tyne, with a plan and other illustrations.

The Transactions of the Shropshire Archaeological and Natural History Society, 4th series, vol. 7, part 2, contains a continuation of Mr. H. E. Forrest's notes on some old Shropshire houses and their owners; papers on the Manor of Rorrington, by Sir Offley Wakeman; on the institution of Shropshire incumbents; on Kingsland and Shrewsbury show, by Mr. John Barker; on Dame Margaret Eyton's will, 1642, by Mr. Stewart Betton; on an order of the Council of the Marches, July 1571, by Miss Caroline Skeel; on medical men in practice in Shropshire, 1779-83, by Mr. R. R. James; on the sequestra-

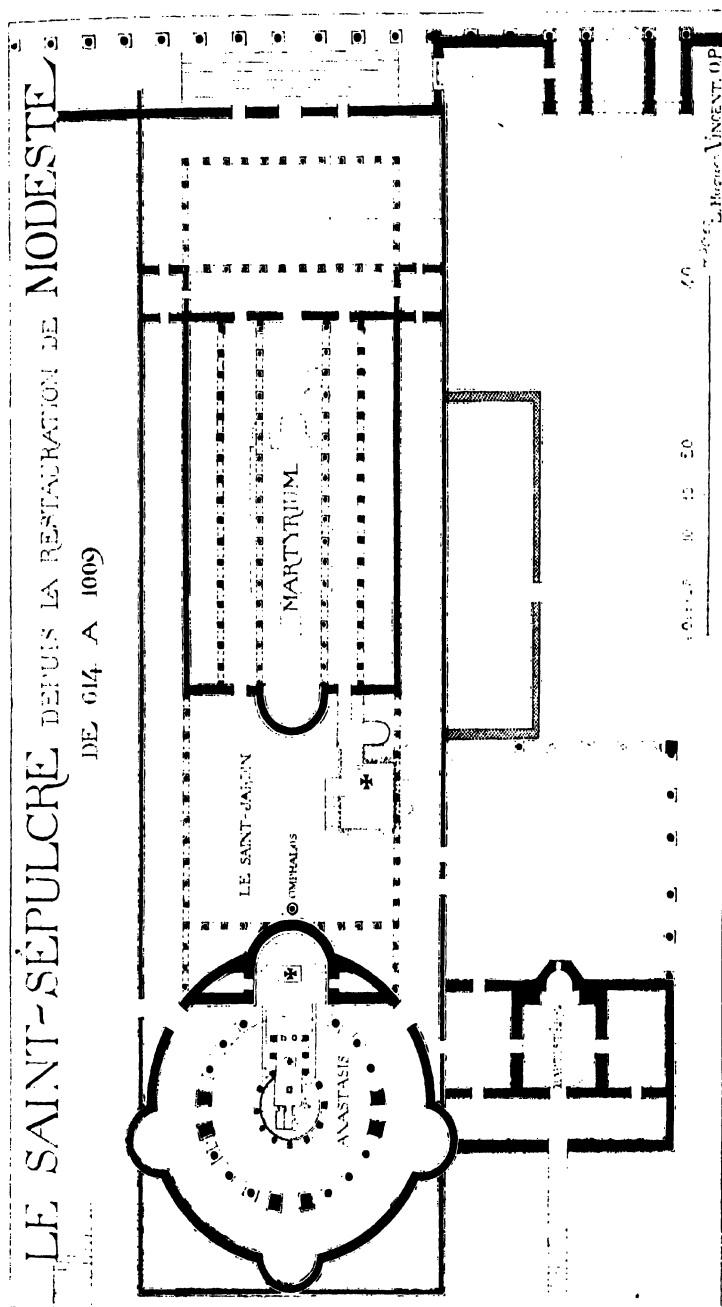


FIG. 2.

Reproduced from 'Jerusalem' by P. Vincent and J. P. Vincent, by permission of the authors and of the Librairie Lecoffre, publisher.

tion papers of John Yonge, senior and junior, of Pimley, by Rev. W. G. D. Fletcher; on Sir Thomas Harris, Third Baronet of Boreatton, by the same author; and on Shropshire transcripts at Hereford, by Rev. F. C. Norton.

Vol. 8, part 1, of the same transactions contains articles on the family of Marston of Afcote, by Mrs. Martin; on the medieval hospitals of Bridgnorth, by Prebendary Clark-Maxwell; a deed relating to the hospital of St. John Baptist, Shrewsbury, by Rev. C. H. Drinkwater; further notes on old Shropshire houses, by Mr. Forrest; on Berwick almshouses and the will of Sir Samuel Jones, the founder, by Mr. R. R. James; on the wills of the Prynce family, by Mr. H. E. Forrest; on the glass in St. Mary's, Shrewsbury, by Canon Moriarty; and on Chancery Proceedings, 1697-8, by Rev. W. G. D. Fletcher.

The Proceedings of the Somersetshire Archaeological and Natural History Society, vol. 66, contains, besides notes on churches and other places in the neighbourhood of Bridgwater visited at the Annual Meeting, papers by Mr. Hamilton Thompson, the President of the Society, on Medieval Building Documents; the sixth part of Dr. Fryer's paper on monumental effigies in Somerset, dealing with thirteenth- and fourteenth-century ecclesiastics; on the geography of the Lower Parrett in early times and the position of Cruca, by Mr. Albany Major; on ancient Bridgwater and the River Parrett, by Rev. W. H. P. Greswell; on Bridgwater Wills, 1310-1497, by Mr. Bruce Dilks; on Curci, the family which gave its name to Stoke Curci (Stogursey), by Sir H. Maxwell Lyte; and on the church bells of Somerset, by Mr. H. B. Walters.

The Proceedings of the Suffolk Institute of Archaeology, vol. 17, part 2, contains articles on Suffolk 'Dane Stones' (pre-Conquest carved stones), by Mr. Claude Morley; on the *Nonarum Inquisitiones* for Suffolk, by Rev. W. A. Wickham; on the history of Shrubland, by Hon. Evelyn Wood; on the church of St. Mary the Virgin, Coddendam, by Rev. W. Wyles; and on Needham Market church, by Mr. E. T. Lingwood.

Sussex Record Society, vol. 26, consists of the concluding part, M-Z, of the calendar of Sussex Marriage Licences recorded in the consistory court of the bishop of Chichester for the archdeaconry of Lewes, and in the peculiar court of the archbishop of Canterbury for the deanery of South Malling, 1772-1837.

Yorkshire Archaeological Society, Record Series, vol. 60, consists of an index of wills, administrations, and probate acts in the York Registry, A.D. 1666-72. Vol. 61 is a volume of miscellanea containing documents dealing with the Preceptory of Newland; compositions for not taking knighthood at the coronation of Charles I; a fifteenth-century rental of Nostell priory; a list of benefices in the diocese of York vacant between 1316 and 1319; subscriptions by recusants, 1632-9; Royalist clergy in Yorkshire, 1642-5; presentations to livings in Yorkshire during the Commonwealth; and Extracts from a Yorkshire Assize Roll, 3 Henry III (1219).

The Proceedings of the Society of Antiquaries of Scotland, vol. 54, contains the following articles: The Mint of Crosraguel Abbey, by Dr. George Macdonald; the Hill Fort on the Barmekin of Echt,

ambulatory type, with three 'bubbles' projecting from the ambulatory, as exemplified by a dozen and more examples in this country alone. Its chief distinction from English work of the period, apart from some Byzantine craftsmanship and the re-use of antique material, is in the circular cupola which crowns the crossing. The church was dedicated on 15th July 1149, the fiftieth anniversary of the capture of Jerusalem by the Crusaders.

The bell-tower which adjoins, and mars the symmetry of, the south front, was probably built before the dedication. It stands over, and incorporates part of, the Byzantine chapel of St. John the Evangelist, and when first built was much higher than at present. A cupola originally crowned this tower, but was destroyed by an earthquake in 1545.¹ The tower was reduced to its present height in 1719 in consequence of the upper stages having become unsafe.

The planning of the monastic buildings presented a difficulty owing to the insufficiency of the space available on both the north and south of the church. The buildings were consequently set out to the east with the cloister touching the centre of the three eastern chapels. The cloister was obviously built when these three chapels were standing, but there is no reason to suppose that it was incomplete in 1149.

The Latin patriarchate which adjoined the rotunda on the north-west was begun during the first few years of the twelfth century, but the heavily projecting buttresses of the still existing block in Christian Street seem to indicate a considerably later date for this portion of the building. On the capture of the city by Saladin in 1187 the patriarchate was alienated from the church and part of it turned into a convent mosque founded by the conqueror and known as the Khankah Salahiyeh. The graceful minaret of this building still adorns the Haret el Khankah, and on the opposite side of the site stands the similar minaret of the mosque of Sidna Omar, built on a corner of the Muristan to commemorate the place of Omar's prayer, on the mistaken assumption that the present main entrance to the church represented the same feature in the time of the Caliph Omar. The priory buildings were abandoned or turned into dwellings at the Moslem conquest and remain to this day in the same state.

The only other incident in the history of the building which need be mentioned is the great fire of 12th October 1808, when the rotunda was entirely burnt out and other parts of the church

¹ A late fifteenth-century German woodcut showing the complete tower is reproduced in the *R. I. B. A. Journal*, 1911, 241.

Aberdeenshire, by Mr. W. Douglas Simpson; report on the excavation on Traprain Law in the summer of 1919, by Mr. A. O. Curle; a hoard of Bronze Age implements found at Cullerne, near Findhorn, Morayshire, by Mr. J. Graham Callander; recent excavations at Kildrummy Castle, by Mr. W. Douglas Simpson; silver cup at St. Mary's College, St. Andrews, by Mr. W. W. Watts; note on a watch signed 'Hieronymus Hamilthion Scotus me fecit 1595', with a view of Edinburgh Castle on the dial, by Sir John Findlay; the Stone Circle at Broomend of Crichtie, Aberdeenshire, by Mr. James Ritchie; Prehistoric Argyll—report on the exploration of a burial cairn at Balnabraid, Kintyre, by Mrs. T. L. Galloway; further Antiquities at Skipness, Argyll, by Mr. Angus Graham; ancient remains at Birnam, Perthshire, by Mr. T. M'Laren; further discoveries of Bronze Age urns in hut-circles in the parish of Muirkirk, Ayrshire, by Mr. Archibald Fairbairn; the accounts of Dr. Alexander Skene, Provost of St. Salvator's College, St. Andrews, relating to the extensive repairs of the college buildings, the church, and the steeple, 1683-90, by Dr. D. Hay Fleming; and notes on the grave slabs and cross at Keills, Knapdale, Argyll, by Mr. W. C. Crawford.

The Scottish Historical Review, April 1921, contains articles on 'Parliament' and 'General Council', by Professor R. K. Hannay; on the Stuart papers at Windsor Castle, by Dr. Walter Seton; on Scottish biblical inscriptions in France, by Mr. W. A. Craigie; on Ninian Campbell of Kilmacolm, Professor of Eloquence at Saumur, Minister of Kilmacolm and of Rosneath, by Dr. David Murray; and on Samian ware and the chronology of the Roman occupation, by Mr. S. N. Miller.

Journal of the Royal Society of Antiquaries of Ireland, vol. 50, part 2. Mr. P. J. Lynch contributes topographical notes on the Barony of Coshlea, county Limerick, including Lackelly, the lake district, Cenn Abrat, Claire, Tara Luachra, &c.; Dom Louis Gougand writes on the earliest Irish representations of the Crucifixion; Mr. T. J. Westropp describes and discusses the promontory forts and traditions of the districts of Beare and Bantry, county Cork; Messrs. E. C. R. Armstrong and R. A. S. Macalister describe a wooden book with leaves indented and waxed, found near Springmount Bog, county Antrim; and Mr. G. H. Orpen continues his study of the earldom of Ulster. Amongst the miscellanea are a description of the seal of Navan, dated 1661; the account of the discovery of a crannog in excavating for foundations in the city of Cork; the description of a Limoges crucifix, probably belonging originally to the preceptory of Mourne; and the record of the discovery of a limestone arrow-head and of pieces of a gold torc near Newmarket, county Clare.

Archaeologia Cambrensis, vol. 20, parts 3 and 4, contains the presidential address on the classification of camps and earthworks, by Lt.-Col. Morgan, delivered at the Swansea meeting of the Association; on 'Homo Planus' and leprosy in Wales, a suggested interpretation of the inscription on the Trawsfynydd stone, by Mr. Egerton Phillimore; notes on objects from an inhabited site on the Worm's Head, Glamorgan, by Mrs. Cunningham; and on the Welsh monasteries and their claims for doing the education of later medieval Wales, by Mr. Stanley

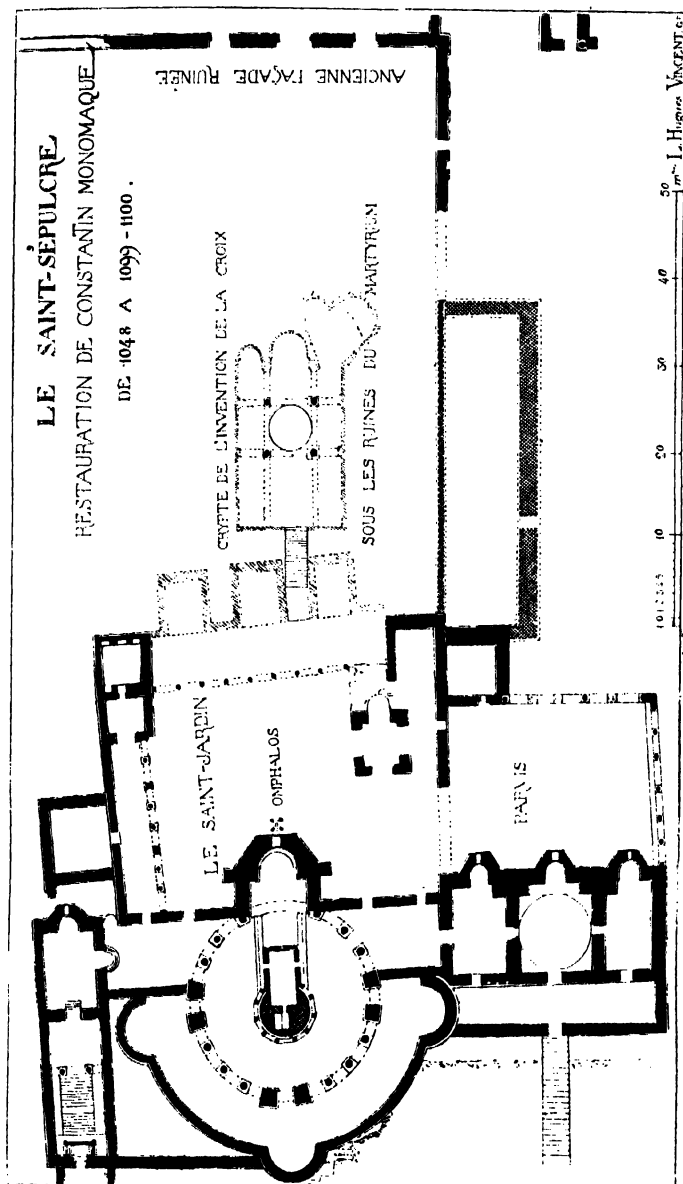


FIG. 3.

Reprinted from 'Jerusalem' by P. Vincent and J. Hugues, by permission of the authors and of the Librairie Leclercq, publisher.

Knight. The number also contains a report of the annual meeting held at Swansea, with descriptions and several illustrations of the principal places visited.

Y Cymrodor, vol. 30, consists of the Latin text of the *De Invectionibus* of Giraldus Cambrensis, with a critical introduction by Mr. W. S. Davies.

The Journal of Egyptian Archaeology, vol. 7, parts 1 and 2, April 1921, contains articles on the mural paintings in the city of Akhetaten, by Mr. N. de G. Davies; on the position of women in the ancient Egyptian hierarchy, by Dr. A. M. Blackman; on the Memphite tomb of King Haremhab, by Mr. J. Capart; on a group of hitherto unpublished scarabs in the Metropolitan Museum, New York, by Mr. A. C. Mace; on Egypt and the external world in the time of Akhenaten, by Dr. H. R. Hall; on El-Kab and the Great Wall, by Mr. Somers Clarke; and on Magan, Meluha, and the synchronism between Menes and Naram-Sin, by Dr. W. F. Albright.

The Journal of Hellenic Studies, vol. 40, part 2, contains the following papers: Hera of Kanathos and the Ludovisi throne, by Mr. S. Casson; Telokles and the Athenian Archons of 288/7-262/1 B.C., by Mr. W. W. Tarn; the Financial History of Ancient Chios, by Professor P. Gardner; a staghorn head from Crete, by Mr. E. J. Forsdyke; Agatharcos, by Mr. J. Six; a new portrait of Plato, by Mr. F. Pontsen; Pisidian Wolf-priests, Phrygian Goat-priests, and the Old Ionian Tribes, by Sir W. M. Ramsay; the Aphrodite from Cyrene, by Professor E. A. Gardner; Cornelius Nepos on Marathon, by Mr. M. Cary; and Cleostratus: a postscript, by Professor J. K. Fotheringham.

The Journal of Roman Studies, vol. 9, part 1, contains articles by Professor Bury on Justa Grata Honoria, daughter of Galla Placidia and Constantius III; by Mr. G. McN. Rushforth, on Magister Gregorius de Mirabilibus Urbis Romae: a new description of Rome in the twelfth century, with the Latin text; by Messrs. A. W. Van Buren and R. M. Kennedy, on Varro's aviary at Casinum; by Mr. M. Cary, on a forgotten treaty between Rome and Carthage: an examination of the evidence whether there was a treaty in force at the outbreak of the first Punic War; by Mr. Gilbert Bagnani, on the subterranean basilica at Porta Maggiore; by Professor R. Knox McElderry, on Vespasian's reconstruction of Spain, being addenda to his article in vol. 8; and by Mr. G. H. Stevenson, on Cn. Pompeius Strabo and the Franchise question.

Comptes rendus de l'Académie des Inscriptions et Belles-Lettres, September-October 1920, contains papers by M. Paul Morceaux, on the martyrs of Djemila, recording the discovery of an inscription, probably covering relics; by le Comte Begouen, on a design in relief in the Trois-Frères cave at Umlesquien-Avantès (Ariège); by le Comte Durrieu, on two miniatures in the library at Vienne; by M. Albertini, on the Table of Measures at Djemila, an inscription with a table of measures, erected by the governor Herodes; by Dr. Carton and M. Cagnat, on the excavations at Bulla Regia in 1919-20; by M. Monceaux, on two victims of the Moors at Madauros; by M. E. Cuq, on the Punic city and municipality of Volubilis; by M. Poinssot, on Datus, conductor praediorum regionis Thuggensis; by M. Charles

sufficiently damaged to enable the Greeks to effect that disastrous restoration which has reduced the church of the Holy Sepulchre to the sombre and cavernous structure that it is to-day, a structure which enshrines side by side the tasteless pretentiousness of the more sober Greek style, with the puerilities with which the Greek attempts to adorn it. The arcade of the rotunda was entirely rebuilt with solid piers, and the light columns and arches of the Norman apse gave place also to solid masses of masonry, which not only render the ambulatory almost entirely dark, but are themselves totally devoid of merit.

Since this restoration, which was completed in 1810, the only material alteration has been the rebuilding of the cupola of the rotunda, which was finished in 1868.

The foregoing sketch is a necessary introduction to the study of the monastic buildings, which is the immediate subject of this paper.

The precinct of the church, priory, and patriarchate during the Latin kingdom was a rectangular space bounded by streets on all four sides; on the north by the Haret el Khankah, on the east by the Khan es Zeit, on the south by the Parvis and Pilgrim Street, and on the west by Christian Street. The only remaining portion of the twelfth-century precinct wall is about the middle of the north side, where a stretch of about twenty yards is still standing and exhibits on the outer face two springers of a stone vault, showing that at that period the street was a covered one.

The main part of the western half of the enclosure was occupied by the church with its adjoining chapels, while the whole of the north-west angle contained the buildings of the Latin patriarchate. The remainder of the area, including the whole of the eastern half, was covered by the buildings of the priory. In general the architectural remains exhibit the familiar characteristics of Norman work, but the ornamental detail displays a curious juxtaposition of typical western carving with Byzantine work of considerable delicacy and excellence. In the cloister annexes, and in the little cloister, late Roman columns and capitals have been re-used, and there is a frequent introduction of that curious architectural feature, the cushion voussoir.

The origin of the cushion voussoir has been discussed by Mr. Phené Spiers¹ and by Mr. Jeffery, who are agreed in deriving it from Sicily. It occurs there in the cathedral and in the tower of the church of S. Maria dell' Ammiraglio, Palermo,

¹ R. I. B. A. *Journal*, 1910, 129. The latest examples of this motif with which I am acquainted are in the sixteenth-century gates of David and St. Stephen at Jerusalem (Bab Nebi Daoud and Bab Sitti Mariam).

Fraipont, on the chronology of the Neolithic Age in Belgium; and by Dom Wilmart, on a re-discovered manuscript of Tertullian.

L'Anthropologie, vol. xxx, nos. 3, 4 (December 1920). The opening paper by Dr. R. de St. Périer describes recent finds in a cave at Lespugne, Haute-Garonne. Apart from superficial deposits there were four occupation levels separated by sterile layers—the first three of La Madeleine date, and the lowest as yet discovered containing Solutré types. Besides harpoons (in the two upper strata) there were bone engravings of horses, a quantity of flint implements, bones and shells, and especially some half-cylinders of reindeer-antler, carved in relief with rings and spirals just like those from Lourdes and Arudy, brought together by our Hon. Fellow, M. Léon Coutil, in *Bull. Soc. préh. française*, 1916, 387. The Solutré level is described as late, but produced the early lozenge-shaped blade and some peculiar shouldered points with concave bases, confined to the Pyrenees and Cantabria, and considered a primitive form of the *pointe-à-cran*. The discovery has an important bearing on the origin and spread of the Solutré culture in the West.

M. Louis Siret, in a paper on the Lady of the Maple, happens to touch on a point raised in our April number; and, accepting the modern view that Druidism was of neolithic origin, contends that it came from the east by way of Spain. In former papers, referred to in *Proc. Soc. Antiq.* xxxi, 152, M. Siret based the neolithic art of western Europe on the palm-tree and the cuttle-fish, and now explains many of the symbols and carvings of that period by the cult of the maple, or tree-goddess who cared for the dead. The rock-markings of Gavr'inis and New Grange are compared with and derived from the patterns on the maple-bark (especially the sycamore, *Acer pseudo-platanus*), and natural scars on the bark are said to have suggested the female figure of the French menhirs and dolmens. The Druids were also tree-worshippers, preferring the oak, and the author follows M. Salomon Reinach in attributing to them the construction of the dolmens; but the connexion suggested between gathering the mistletoe and fertilizing the date-palm is far-fetched and unnecessary.

Dr. Verneau's article on the early ethnography of Mauretania gives a useful summary of the arrow-heads, celts, and other stone implements of the western Sahara, including a grooved stone used for smoothing the shafts of arrows, as in the late neolithic or Copper Age of Europe.

Revue Archéologique, 5th series, vol. 13, January–March 1921, contains the following papers: Irish miniatures with iconographic subjects, by M. Jean Ebersolt; a new aryballos in the Louvre, by Mr. Friis Johansen and M. E. Potier; texts and scholia of the *Odyssey*, by M. Victor Bérard; the bas-reliefs at Marquinez (Alava), by the Abbé Breuil; engravings in the cavern of Isturitz, by M. E. Passemard; the lead trade in the Roman period (continuation), by M. Mauria Besnier; our ancient cathedrals and the masters of the works (continuation), by M. F. de Mély; Thracian archaeology (continuation), by M. G. Seure; the working of iron ore in Gallo-Roman times, by M. Henri Corot; Prometheus, by M. Louis Siret; and a note on terra-cotta statues, by M. W. Deonna.

Bulletin Monumental, vol. 79, parts 3, 4, contains the following articles:

which appears to have been built about 1143, and also in the church of S. Spirito, in the same town, built about 1173. It occurs also in isolated instances in France, but so far I have been unable to find a dated example in Europe earlier than the church of the Holy Sepulchre. In Cairo, however, there is a well-defined example in the flanking towers of the Bab el Futuh, a gate built in 1087-91.¹ The masonry of the towers bonds with the main gate, and appears to be contemporary with it. The feature appears to me to bear a close architectural affinity with the scalloped window and door heads which are a characteristic feature of the later Fatemite mosques and those of the Ayu-bide dynasty which followed them, and of which early examples are to be found in the mosques of El Akmar, 1125, and Saleh Talayeh, 1160. The gates of Cairo are ascribed by Makrizy to three brothers from Edessa, and Professor Lane Poole accepts this and assumes a Byzantine origin for the work, more especially as Greek masons' marks appear on the stones. It would be interesting to know whether any genuine Byzantine building exhibits this feature.

I shall now describe the remains of the monastic buildings, beginning with the great cloister and the buildings immediately surrounding it, and then passing to the little cloister and the infirmary block.

The GREAT CLOISTER was a slightly irregular square (114 ft. by 120 ft.) immediately to the east of the central apsidal chapel of the church. This left two irregular spaces to the north and south bounded by the main apse of the church. These spaces were roofed in and vaulted, and formed annexes to the cloister, that on the north forming a vestibule to the main processional entrance from the convent. It appears, indeed, that this was at first the only processional entrance, as the corresponding position on the south was occupied by the entrance to St. Helena's chapel and the existing doorway farther west is a cutting through the Norman wall. This last opening, however, appears to have formed at a later date the second processional entrance, as Theodoric (1175), describing his circuit of the cloister, says 'as one is re-entering the church from the other side (i. e. the south) there is a figure of Christ on the cross painted . . . to the eastward of this as one goes down into the venerable chapel of St. Helena'.²

The western side of the great cloister is still standing and shows the springers of the vault resting on coupled corbels with

¹ See the illustration in H. Salachi, *Manuel d'art musulman — l'architecture*, p. 98.

² Palestine Pilgrims Text Soc., vol. 17, Theodoricus of Würzburg.

the abbey church of Mouzon, by Colonel Victor Donau; the church at Creil, by M. F. Lefèvre-Pontalis; the church at Semur-en-Brionnais, by M. André Rhein; the basilica of St. Front at Périgueux, by the Marquis de Fayolle; the château of Sagonne, by M. Deshoulières; a twelfth-century house at Chartres, by M. A. Mayeux; Carolingian stones in the tower of La Charité-sur-Loire, by M. Paul Deschamps; the church at Puiscaux, by M. H. Deneux; the legend of Hugh Lallement, sculptor of Châlons, by M. F. de Montremy; and the stalls at St. Benoît-sur-Loire, by Mme J. Banchereau.

Bulletin de la Société belge de Géologie, &c. xxx. (1920): *Sur la découverte de deux squelettes d'hommes flémiens à Spiennes*, par A. Rutot. In four pages M. Rutot records the discovery of two complete human skeletons, and reconstructs a tragedy. On a shelf in the chalk cliff a primitive miner, with a pike beside him for food, had been occupied in extracting flint nodules, and was resting on the spot when he was overwhelmed by a loosened mass of chalk. His companion went to his assistance, and had bored a tunnel in the heap when a second fall occurred, and a large stone crushed the rescuer's skull. This method of procuring raw material is taken to be earlier than mining, the normal system at Spiennes; and the absence of polished or chipped flint or even deer-antler picks being evidence against a late or early Spiennes date, the only course is to refer the skeletons to the period of Le Flénu, when absolute barbarians invaded Belgium and drove out the culture of Tardenois. It will be confessed that the interpretation of the find is open to criticism, but the necessary details have been noted; and the skeletons, which are in perfect order and show small but long skulls, depressed foreheads, and a certain prognathism, have been carefully preserved at the Royal Museum of Natural History, Brussels.

Académie royale de Belgique—Classe des Sciences, Bulletin 1920, pp. 456-71. *Sur la faune des Mammifères de l'époque de la Pierre polie en Belgique*, par A. Rutot. Excavations since the armistice at Spiennes, especially in the camp at Cayaux, have yielded bones of animals used for food by the flint-miners of the neighbourhood; but among them were also remains of the grizzly bear and the reindeer. The former is generally supposed to have left western Europe at the close of the Pleistocene, after being in evidence from Le Moustier times; but the author would explain the reindeer by the disturbance of quaternary loam by the mine-shafts. The occurrence of the Persian wild goat (*Capra aegagrus*) is also a surprise; and it is pointed out that the presence of sheep does not imply that domestication had begun. It occurs in Belgium during the Mas d'Azil period, and, indeed, goes back to that of Le Moustier in the cave called Trou de la Naulette, to the middle Aurignac period in the Spy cavern, and to upper La Madeleine in the Trou de Chaleux. The tendency in England is to explain such occurrences in Pleistocene deposits by faulty excavation, but *all* excavators are not bad observers.

The elk is another unexpected item, but it flourished in Belgium during the cave period, and survived in central Europe from the neolithic to the middle ages. On the other hand, the dog and horse are absentees, the former having, however, been found with one of the

a common abacus and the curious and unpleasing elbow bend to the shafts, which is a characteristic of much twelfth-century work in Palestine. The outer wall of the cloister remains also on the north and part of the south and west sides, but has been much altered. Three similar corbels remain in the north wall and two more in the south annexe, so that the general character of the cloister is established. Of the arcade wall the only fragment remaining is the north-west angle. At this point the pier with the springing of the arches on the south and east yet remains; the details are evidently the work of Byzantine masons and are of late Classic type. The pier has a moulded and enriched impost and plinth, and the archivolt has a heavy egg-and-dart ornament similar to the contemporary work in the mosque of Aksa in the Haram. The complete arcade probably had semi-circular arches not subdivided.

The north-west bay to the cloister is the only one still retaining its vault. It is open to the two bays of the north annexe, the vaults being supported on a central column with a late Roman Corinthian capital. The main vault ribs have one large and two small rolls of true Romanesque section, and the vault corbel in the north wall has a pair of foliated capitals evidently also of western origin. The processional doorway to the church is now cut in two externally by the ceiling of a modern chamber, so that only the richly moulded and pointed arch is visible.

On the south side of the central apsidal chapel of the church the outer wall of the cloister formed an open arcade of plain rectangular piers and three arches opening into the south-west annexe. These three arches are now all filled in, the two northern bays forming an Abyssinian chapel, with a plain vault. The third bay with its extension westwards belongs to the Greeks, and that in a line with the south cloister walk to the Copts. These two divisions were formerly both open to the cloister and had a plain pier at the angle of the cloister and a free column, now built up in the wall, farther west. Against the refectory wall the vaulting, which still exists, springs from coupled corbels, the westernmost having one capital only with the abacus continued across a flat pilaster. The north alley of the cloister, and possibly others also, had a second story of which traces remain in the north wall, where there are arched recesses, the piers of which rested on the cloister vault and do not exactly correspond with the bays below.

The area of the cloister, with that of most of the refectory, is now occupied by huts and shanties of Abyssinian priests, but a space remains open surrounding the dome of the subterranean chapel of St. Helena, a circular structure with six buttresses, some flat and

flint-miners at Strépy, but the horse is unknown in Belgium during the neolithic, though abundant before and after. Déchelette pointed out that the horse is barely represented in the lake-villages of upper Austria, and that it must have been domesticated long after the dog; but M. Rutot challenges his conclusion, and contends that the idea of domesticating animals came from the East, as did also, about the same time, the systematic cultivation of wheat and the manufacture of ribbon-ware (*céramique à bandes*, *Bandkeramik*). A list of animals found in peat is also given, and the deposit is said to have begun about the middle of the neolithic, a little before the time of polished stone, and to have continued till the third century of our era; hence finds in the turbaries are of little chronological value.

Fornvännen: Meddelanden från K. Vitterhets Historie och Antikvitets Akademien, 1920, Häft 4 (Stockholm). An article on medieval Alvastra, by Otto Frödin, contains an illustration of a reconstructed Viking tomb with the upright stones engraved in the Ringerike style and much resembling a slab in the British Museum, perhaps from St. Paul's Churchyard. It dates from the first half of the eleventh century and shows the original use of a shaped slab found below the Sverkersgården stone building at Alvastra. Prehistoric conditions in the Baltic are discussed by Gunnar Ekholm, who gives a map showing the connexion between north-east Germany and Sweden in the Bronze Age, East Russian products in the north, and a Swedish type of bronze socketed celt in Finland and East Russia. In the Cist period the pottery characteristic of the megalithic graves disappears, and gives place to the single-grave ware with cord-pattern decoration. In a sense the latter culture was indigenous, being directly descended from the burials connected with the early habitation sites (*Boplatsgraven*) of Scandinavia; and megalithic tombs and pottery were due to an intrusion from oriental lands viâ Western Europe—a splendid interlude in Northern prehistory. Towards the end of the Stone Age, however, the spiral found its way to Scandinavia across Eastern Europe, and this became the ordinary route in the Bronze Age, to the exclusion of western influences. The culture distinguished by the boat-shaped axe and associated pottery seems to be earlier in Finland than in Sweden, and both countries probably derived it from Central Europe. Single-graves in the Elbe-Saale district, for instance, normally contain the so-called faceted axe-hammer and cord-pattern pottery; and beads and carvings in amber, as well as the pottery, show a lively intercourse between East Prussia and the interior of Russia towards the end of the neolithic period. To define the spheres of influence and to date the various lines of communication is an archaeological achievement that considerably helps towards a correct interpretation of prehistoric finds in Europe.

some semi-octagonal, and a pointed window in each face. This structure rises above the paved courtyard.

The middle part of the east side of the cloister was occupied by the chapter-house, flanked by a building on each side of doubtful use. Of these buildings part of the north wall of the chapter-house and some other fragments only remain.

The CHAPTER-HOUSE (72 ft. by 34 ft.) is now partly covered by a modern building and by a Moslem house and yard. In the middle of the remaining portion of the north wall is a massive and much weathered vaulting corbel, indicating that the building was roofed in four bays. There are no remains of the entrance from the cloister, but a broad foundation under the modern house indicates the position of the south wall, and for the east end a part of the still remaining wall of Constantine's atrium was utilized. This wall includes the great central doorway, opening, according to Père Vincent, into the atrium.

The building adjoining the chapter-house on the north is represented by its east and west walls, but now has a much later vault in four bays and a window of the same period in the west wall. The doorway in the same wall is partly original, as are the two plain archways opening into the dormitory sub-vault. The building south of the chapter-house has been almost entirely destroyed, but was bounded on the south by the side wall of Constantine's atrium, which is still standing.

The north side of the cloister is bounded for its whole length by the dormitory and its sub-vault. The night stairs remain at the west end of this building, but have been entirely modernized. They opened into the north-west angle of the cloister, conveniently near to the processional doorway to the church.

The DORMITORY was a building (160 ft. by 54 ft.) three bays in width, standing on a sub-vault also in three alleys. There is some evidence that the outer alley or aisle on the north was an addition to the plan, though there cannot have been much interval between the two periods of building. This addition is indicated by the thin wall at the west end of the outer aisle and by the angle showing in the small chamber east of the infirmary cloister; also the outer aisle is wider than the inner pair. At the west end of the sub-vault is a cross alley forming an entrance to the cloister from the outside. The outer doorway is probably original, but without distinctive features; it was covered by an open vaulted loggia on the north, and of this two piers and as many bays of plain vaulting remain. The southern doorway of this entry is also probably original and has a flat lintel supported by carved brackets much restored. With the exception of the southern alley the

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- See also Textiles.

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middle portion of the sub-vault is occupied by cisterns, and at a lower level beneath them is the great reservoir called the cistern of St. Helena. The eastern end of the sub-vault remains largely unaltered; the side walls are faced internally with ashlar, from which springs the barrel vault which is crossed at intervals with ashlar bands. In the outer wall are two original single-light and pointed windows, and on the external face of this wall are three springers, probably of a vaulted passage on the site now occupied by the convent of St. Karalambos. In the east wall of the north alley of the sub-vault is a doorway of post-Latin date, and adjoining it an original ashlar springing of an arch, possibly connecting the dormitory with the former 'reredorter'. Below it is the crown of a pointed doorway, now almost buried.

Of the dormitory itself only two bays of the north aisle at the east end remain. They are incorporated in a building belonging to the Franciscans. There are two pointed arches and square piers with chamfered angles and hollow-chamfered imposts. The plain vaulting of these bays remains, and in the outer north wall are two original deeply splayed windows with pointed heads. The remainder of the dormitory is occupied by more or less modern buildings belonging to the Coptic convent.

The REFECTORY flanks the cloister on the south side and is the best-preserved portion of the monastic buildings. It measures 121 ft. by 29 ft., and was originally of one story only. Owing to a change in the ground level there is a plain vaulted undercroft under the three western bays. The south or outer wall is of great thickness owing to its incorporating in the lower parts a late Roman wall, possibly part of that built by Constantine to surround the Holy Places. Towards its western end is a Roman doorway with a joggled relieving-arch and a moulded architrave. Of the twelfth-century building the south wall remains standing for its whole length to the full height, but of the north wall only about two and a half bays remain at the west end. This part of the refectory is roofed and has been divided into two stories, the upper forming the chapel of the Greek convent of Abraham, and the lower being cut up into rooms. In the thickness of the south wall at this level is a passage raking upwards, possibly the remains of a pulpit, but more probably modern. The chapel has two original windows on each side with plain pointed heads, but the western one on the south has been cut away to form a doorway. The vault in this part of the building is intact, and has a plain square rib between the bays, springing from heavy corbels with square abaci. The vault is groined back over the windows. Externally the north wall is faced with ashlar and has flat pilaster buttresses between

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See also Egyptology.

the windows. The remaining four and a half bays of the south wall east of this chapel have each an original window and the springing of the main vault. The corbels in this part of the building are varied, and some have incised ornaments of volutes on the cushion capitals.

East of the refectory and in continuation of it is a building of three bays, of which the south and east walls remain standing. In the former are the springers of a rubble vault. Farther east in the same range was another apartment of which remains of the bases of two piers supporting the vault in the centre have been found. The north wall of this room is formed by the south wall of Constantine's atrium, already referred to; this wall has externally a succession of pilaster strips fairly close together dying into the plinth. They are rather similar to the work of the outer wall of the Haram at Hebron, and this similarity suggests an approximate date for that work. These two apartments, from their juxtaposition to the refectory, may reasonably be assigned to the buttery and kitchen. The last now forms part of the chapel of a Russian hospice.

This completes the buildings immediately surrounding the great cloister.

The INFIRMARY CLOISTER (45 ft. square) lies north of and overlaps the annexe of the great cloister. In this annexe is the communicating doorway, now modernized. The cloister is four bays each way and the east walk remains open; the remaining walks have been partitioned off and cut up into rooms. Under the south-west part of the cloister is the so-called prison of Christ, approached by the Byzantine colonnade adjoining the north transept of the church.

The area of the open court has been reduced by half by the insertion of a modern arch springing from the east to the west arcade walls and supporting a platform above. The east walk of the cloister has four bays of plain vaulting springing on the east side from short circular columns of antique origin, with rough capitals, one of them rudely moulded. The bases are deeply buried. The arcade wall has two pointed arches of which the chamfered inner order has been removed, but it is continued down the central pier below the impost moulding. The two corner piers have round shafts worked on the angles, and the arch opening into the south walk of the cloister springs from a column against the outer wall, but is now built up. The middle pier of the south walk was apparently a column, with a second column opposite to it as a respond. The rest of the cloister presents no features of interest and has been much altered. The cloister

Textiles.

*The Franco-British Exhibition of Textiles in the Victoria and Albert Museum, 1921. $7\frac{1}{2} \times 4\frac{3}{4}$. Pp. 28, with 17 plates. London: Stationery Office. 6d.

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Proceedings of the Society of Antiquaries

Thursday, 17th March 1921. Sir Hercules Read, President, in the Chair.

Mr. Charles Igglesden and Mr. Eric George Millar were admitted Fellows.

Dr. W. L. Hildburgh, F.S.A., read papers on bronze polycandela found in Spain; on some examples of medieval Catalan embossed sheet metal work, both of which will be printed in the *Antiquaries Journal*; and on some Spanish champlevé enamels, which will be printed in *Archaeologia*.

Thursday, 24th March 1921. Mr. C. L. Kingsford, Vice-President, in the Chair.

A special vote of thanks was passed to Mr. Maurice Rosenheim, F.S.A., for his gift of a seventeenth-century English heraldic MS.

Mr. Pretor Whitty Chandler was admitted a Fellow.

The Report of the Auditors of the Society's accounts for 1920 was read, and thanks were returned to the auditors for their trouble and to the Treasurer for his good and faithful services.

Mr. A. W. Clapham, F.S.A., read a paper on the Priory and 'Manor' of Dartford, which will be printed in the *Antiquaries Journal*.

Thursday, 14th April 1921. Sir Hercules Read, President, in the Chair.

Mr. C. L. Kingsford, Vice-President, read a paper on some London houses of the Tudor period, which will be printed in *Archaeologia*.

Thursday, 21st April 1921 at 5 p.m. Sir Hercules Read, President, in the Chair.

The Rev. Francis Neville Davis was admitted a Fellow.

Mr. C. R. Peers, Secretary, read a paper on two relic-holders from altars in Rievaulx Abbey, which will be printed in the *Antiquaries Journal*.

Mr. E. A. Rawlence, F.S.A., exhibited the original plan on vellum made by Robert Adams, of the Defences of the Thames in 1588, showing the position of the two booms, of the forts on the river bank, and the route of Queen Elizabeth's progress from Greenwich to the camp at Tilbury.

had an upper range probably on all four sides, but there is now an open flagged terrace here, and the former upper story is only proved by four ashlar springers of the vault, one on the west, two on the south, and one in the south-west angle. The outer walls remain standing only on part of the south and west sides. East of the cloister on the ground floor are two narrow dark vaulted chambers of doubtful use.

Adjoining the cloister on the north is an extensive vaulted building three bays in width, presenting some very puzzling features. It is of rough construction and must be of earlier date than the obviously twelfth-century building which has been built against it on the west side. In the middle of this west wall is a large doorway with a square head, evidently formerly external.

The narrow western bay with the wide bay adjoining it, forming a square in the middle of the building, is part of the original structure, but the two bays to the east are later additions or rebuildings and themselves show evidence of much alteration. If it be assumed that the original building terminated in three apses immediately to the east of the square bay where the later work begins, the plan is identical with that of the chapels of several of the smaller convents of the Greek rite still remaining in the city. In this plan the narrow western bay formed a narthex or ante-chapel, separated from the eastern part by the iconostasis or screen. In this case the existence of a Greek or Syrian convent on the site at the Latin conquest must be assumed, and, although I have found no documentary evidence of this, to judge from the numerous buildings of the class still existing it is not at all unlikely. In any case there is little doubt that the infirmary chapel of the Latin priory formed part of this block and that the existing building was its substructure. The roughness of the masonry and the lack of any trace of ritual arrangements seem to preclude the possibility of its being the chapel itself or that it served as the chapel of the assumed Greek convent which preceded it. The existing building above it is quite modern.

Adjoining the west side of this structure and overlapping about half of the west side of the infirmary cloister is a long vaulted apartment (107 ft. by 41 ft.), five bays long and two bays wide, extending almost to the northern wall of the precinct. There is little doubt that it, with an upper story now destroyed, formed the infirmary hall. A curious feature of the plan is that the vaulting system with its abutments is not set regularly within the outer walls, so that the depth of the responds varies from north to south on each side. The building is now divided by a modern wall into two unequal parts, the northern being in the occupation of

Thursday, 28th April 1921. Anniversary Meeting. Sir Hercules Read, President, in the Chair.

Mr. E. Neil Baynes and Major W. J. Freer were appointed scrutators of the ballot.

Mr. Arthur Edwin Preston was admitted a Fellow.

The following report of the Council for the year 1920-1 was read :—

The year that has passed has been in many ways a critical one in the history of the Society. The special Committee which was appointed to consider the financial position reported in May, and its recommendations, so far as they are concerned with finance, have been fully dealt with by the Treasurer.

The appointment of this Committee was considered to give a good opportunity for taking in hand a matter which had been long in contemplation, namely, the thorough revision of the statutes. The Committee's recommendations were approved by Council and brought before a special meeting of the Fellows in December, when they were carried with certain amendments and omissions. The general effect of the revision is to simplify procedure and to abolish much that had become obsolete. An important provision is that increasing the subscription to new Fellows to £4 4s. per annum, and introducing a sliding scale for composition fees, of which advantage has already been taken in a few instances.

Two other events of considerable importance in the history of the Society have occurred during the past year. The passing of the Sex Disqualification (Removal) Act made it for the first time possible to elect women to the fellowship of the Society. The Council nominated, *honoris causa*, four ladies, who were duly elected and have already taken part in our proceedings.

The second event was the replacement of the annual volume of *Proceedings* by a quarterly publication to be known as the *Antiquaries Journal*. Two parts have already been published, and the *Journal* has received a warm welcome from the public press and from antiquaries generally. Although it is too early as yet to be able to state the amount of outside support which it will receive, the sales of the first number were very encouraging and there is every reason to hope that it may prove a financial success as well as supply an undoubted want in archaeological literature.

The Library Committee has met regularly and, in addition to its ordinary duty of recommending books for purchase, has adopted a method which it is hoped will simplify the registration of books in circulation from the library. It has also been carefully through the lists of periodicals received by exchange or purchase, and has been enabled to make good many gaps in our series, due in great measure to the willing co-operation of the societies whose publications we receive.

In the matter of Research Colonel Hawley continued his excavations at Stonehenge throughout the year, and the report on his first season's work was printed in the first number of the *Journal*. The Office of Works has decided not to proceed with its task of securing the stones during the coming season, but Colonel Hawley has been empowered to continue his excavations of the 'Aubrey' holes and the

an oil merchant and the southern being the basement of the chapel of the Coptic convent. The south-west bay is also walled off to form a latrine. The condition of the southern part is deplorable ; it contains several open cesspools and drains and is unlighted, so that careful examination is both disgusting and hazardous. The ground level furthermore, in this part, has risen almost to the level of the spring of the vault. The northern part is much more free. The square piers have round shafts worked on the angles, and the quadripartite vault has ashlar bands of slight projection between the piers, forming pointed arches. In the north wall are two original deeply splayed windows with pointed heads, and farther east is an original entrance passage with ashlar jambs and a pointed barrel vault ; the external entrance appears to have been altered in the thirteenth century. In the north bay of the east wall is another original window with a pointed head and a moulded external label. The northern part of this building has now no structure above it, but over the southern part stands the chapel of the Coptic convent ; some walls of this building may be ancient, but all its existing features are modern.

Adjoining the infirmary hall on the north-east is an irregular apartment of two bays dating from later in the twelfth century, as it covers the original window already referred to. It has quadripartite vaults divided by a skewed and pointed arch springing from corbels with an inverted hook moulding. In the south bay of the east wall is a fine pointed doorway of two recessed orders with curious mouldings, probably dating from the thirteenth century.

This completes the buildings belonging to the infirmary block, and the only remaining structure of the group is the former PALACE OF THE PATRIARCHS which adjoins Christian Street and abuts on the west side of the rotunda. As still existing, it is a building of three stories, with two stories of substructures partly cut out of the rock below. The floor, level with the street, is cut up into shops and a caracol or police-station ; the floor above is mainly occupied by the mosque of the Khankah Salahiyyeh, and the top floor forms the dwelling of the Imam of the mosque. The street front now consists of six bays divided by boldly projecting buttresses plainly tabled back at the top and all of good ashlar. The inner or eastern wall, where it rises above the rotunda, has been much restored, but part of the old facing remains. In the northernmost bay of the street-front is an elaborate doorway of two recessed orders, with two shafts to each jamb having carved and foliated capitals, much damaged, and a pointed and moulded arch. This entrance is placed axially with the chapel now known as that of the Apparition, to which (as Père Vincent conjectures)

ditch, and has already been at work for some time. It is hoped that his second report will be presented to the Fellows at the last meeting of the session.

In accordance with a recommendation of the Research Committee it was decided that no attempt should be made, at least for the present, to continue the excavations at Old Sarum or at Wroxeter, partly owing to the unlikelihood of sufficient funds being raised and partly in deference to local opinion. The Shropshire Archaeological Society has accordingly resumed its tenancy of the site of the 1859 excavations at Wroxeter and has taken over all the Society's liabilities under this head.

Grants have been made from the Research Fund in aid of the excavations at Ilkley, Ospringe, Segontium, Wayland's Smithy, and St. Augustine's, Canterbury.

In the place of Mr. Clinch, whose sudden and unexpected death is greatly deplored by the Council, Mr. A. E. Steel has been appointed Clerk to the Society. Mr. Steel has been in the Society's service for nearly seventeen years and may confidently be expected to carry out his new duties to the entire satisfaction of the Officers and Fellows.

The Council cannot close this part of its report without expressing its great regret that Sir Edward Brabrook has desired not to be nominated for re-election as Director at the Anniversary. He has held this office for upwards of ten years, and may naturally claim that he has earned his retirement. In acceding to his request the Council desires to express the hope that he may be long spared to adorn his new dignity of 'Father' of the Society.

The losses by death during the past year have been about the average, but the Council greatly regrets to note that the number of resignations has again increased considerably.

The following have died since the last Anniversary :—

Ordinary Fellows.

Rev. Prebendary Thomas Auden, 11th November 1920.

Sir Herbert Barnard, Knt., 30th June 1920.

Robert Birkbeck, 18th November 1920.

Edward Thomas Clark, January 1921.

Samuel Pepys Cockerell, 12th March 1921.

Oliver Codrington, M.D., 3rd January 1921.

Colonel Sir James Gildea, G.B.E., C.B., 6th November 1920.

Thomas Tylston Greg, M.A., 18th September 1920.

Alfred Edmund Hudd, 7th October 1920.

William Thomas Lancaster, 13th November 1920.

Charles Lynam, Hon. F.R.I.B.A., 21st February 1921.

Rev. Walter Marshall, 6th March 1921.

Rev. Robert Scott Mylne, M.A., B.C.L., 23rd November 1920.

George Payne, 29th September 1920.

Edward Shearme, 11th September 1920.

Rt. Reverend Thomas Stevens, D.D., 22nd August 1920.

Sir Arthur Vicars, K.C.V.O., 14th April 1921.

Honorary Fellow.

Le Comte Robert de Lasteyrie, 29th January 1921.

a descent was made by a long flight of steps terminating in a vestibule, of which the two fine Byzantine columns remain. It is possible that the Apparition chapel formed the chapel of the patriarchate during the Latin kingdom. The rest of the range is plainly vaulted with square ribs between the bays, and in the south wall is a blocked window showing that the original building extended no farther than it does at present in that direction. The end room towards the south has in its north wall two Corinthian columns built up, but formerly opening into the next apartment by an open arcade; they are of late Roman work re-used.

The first floor is occupied by the mosque founded by Saladin, and has a mihrab in the south wall. In general character it is similar to the floor below, and has a vault with square ribs and square abutments against the walls. As it has never been cut up by partitions, it may have been the hall of the patriarchate, though the vault is low and the width meagre. There are two original windows with pointed heads, now blocked, in the west wall. Only one room on the second floor is of interest; it is at the south end of the range and adjoins the rotunda. It is divided into two bays by a vaulting rib which springs from columns against the north and south walls, with sculptured capitals. The northern capital is much defaced, but the southern one has foliage and a face of Romanesque character.

Another wing of the palace apparently extended at right angles to this building and formed the northern boundary of what is now the Franciscan convent, but except for part of its southern wall there are no remains. Other remains incorporated in the out-buildings of the Khankah Salahiyeh may indicate further buildings in that direction, but their traces are so fragmentary that it is not improbable that they are only re-used material.

This completes the list of the Romanesque buildings now standing within the precinct, and in conclusion I should like to express the hope that, now that the city has passed into our hands, something may shortly be done to redeem the surviving remains of this celebrated convent from the condition of squalor and neglect into which their present custodians have suffered them to fall.

The Rev. Thomas Auden, Prebendary of Lichfield, who died at the age of 84, was ordained in 1859, and after spending ten years as a schoolmaster, became successively incumbent of Ford, St. Julian, Shrewsbury, and Condover. He took an active interest in local affairs and had been chairman of the Atcham Board of Guardians and Vice-Chairman of the Shropshire Education Committee.

All his life he was a keen archaeologist and was one of the original members of the Shropshire Archaeological Society, of which he was Chairman of Council. He had a great gift for popularizing any study which he took up, and his books, among which may be mentioned his *History of Shrewsbury*, were models of clear, well-balanced English. He had for many years urged the excavation of the site of Viroconium, and when at last it was possible for the Society of Antiquaries to begin the work, he threw himself into the organization with characteristic energy, being a regular attendant at the meetings of the Research Committee in London, acting as chairman of the local committee, and doing much to stimulate local interest and to raise the necessary subscriptions.

Sir Herbert Barnard was born in 1831 and elected a Fellow in 1855. By profession a banker, he had taken a prominent part in public affairs and from 1884 to 1908 was chairman of the Public Works Loan Commission. He was knighted in 1898.

He seems to have taken no part in the work of the Society, nor to have contributed to its proceedings, but in 1913 he succeeded Sir Charles Robinson as 'Father' of the Society, and on his death had been a Fellow for nearly sixty-five years, a period which appears to have been only twice exceeded in the Society's history.

Mr. Samuel Pepys Cockerell, who had been a Fellow since 1904, was a well-known and popular figure at the meetings of the Society. Related to at least two eminent architects and artists, he was himself an artist of distinction, and had travelled much abroad in pursuit of his profession. A descendant of Samuel Pepys, the diarist, it was only proper that he should have been President of the Pepys Club, a position which he was holding at his death. He served on the Council in 1912 and 1913.

Dr. Oliver Codrington was best known as a numismatist, having been for many years one of the Secretaries of the Royal Numismatic Society, to whose chronicle he made several important communications. Beyond exhibiting a glazed tile of unusual form before the Society in 1905, he does not appear to have taken any active part in our proceedings.

Sir James Gildea was born in Ireland in 1838 and was educated at St. Columba's College, Dublin, and Pembroke College, Cambridge. He served in the Franco-Prussian War on behalf of the National Society for Aid to the Sick and Wounded, and after the Zulu and Afghan wars raised large sums of money for the relief of the dependants of those killed or wounded in those campaigns. In 1885 he founded the Soldiers' and Sailors' Families Association, of which he

remained until his death chairman, treasurer, and one of the trustees. He also founded the Royal Homes for Officers' Widows and Daughters, and from 1890 to 1895 was organizing secretary of Queen Victoria's Jubilee Institute for Nurses.

Mr. Alfred Edmund Hudd was well known to the Fellows for the prominent part which he took in the work of excavating Caerwent, for many years acting as treasurer of the excavation fund and giving much assistance in the superintendence of the excavations. He also took a considerable share in the preparation of the excavation reports and made several other contributions to our *Proceedings*.

He had a thorough knowledge of the archaeology of Bristol and its neighbourhood and was founder of the Clifton Antiquarian Club, which did much valuable work during the twenty-seven years of its existence. On its dissolution in 1912 the balance of its funds were at Mr. Hudd's suggestion handed over to the Society's Research Fund. He was also an original member of the Bristol and Gloucestershire Archaeological Society, of which he was a Vice-President and member of Council. He died at his house at Clifton on 7th October at the age of 74.

Mr. William Thomas Lancaster had taken little actual part in the affairs of the Society, but he was a prominent member of the Yorkshire Archaeological Society, of which he was honorary librarian and to whose transactions he had made many important contributions. His interest in that society is evident from the fact that he left it a valuable bequest in his will.

Mr. Charles Lynam, who died on 21st February, at the advanced age of 92, had filled a prominent place in the municipal life of the Potteries, having been Borough Surveyor of Stoke and subsequently member of the Council, Alderman, and Mayor, and he was held in great esteem by his fellow-townsmen. He was educated at Christ's Hospital, and took up architecture as a profession, practising in his native town, where he soon was employed on many public and private works. He was an Honorary Fellow of the Royal Institute of British Architects.

He did much archaeological work during his long life, his most important undertaking being probably his excavation of Croxden Abbey, on which he published a well-illustrated monograph. He only made one contribution to the Society's *Proceedings*, but for many years had served as Local Secretary for Staffordshire, and was a frequent visitor to the Library until advancing years made it difficult for him to come to London.

An obituary notice of *Mr. George Payne*, who was prominent as the founder of the Museum at Rochester and had done much archaeological work in Kent, has already appeared in the *Journal* (p. 78).

Bishop Thomas Stevens died in August at the age of seventy-two, but a few months after he had resigned the suffragan bishopric of Barking. Educated at Shrewsbury and Magdalene College, Cambridge, he was ordained in 1865 and spent the greater part of his life working in the East End of London or in London-over-the-Border,

He was consecrated Bishop of Barking, then a suffragan of St. Albans, but later of Chelmsford, in 1901, having previously been appointed Archdeacon of Essex, which position he continued to hold after his consecration. He was elected a Fellow of the Society in 1889, but never found the opportunity of taking any part in its affairs, although he was an active member of the Essex Archaeological Society, of which he had been President.

Sir Arthur Vicars died under tragic circumstances on 14th April, his house being set on fire and completely destroyed.

He was born in 1864 and educated at Magdalen College School and Bromsgrove. In 1893 he was appointed Ulster King-of-Arms in succession to Sir Bernard Burke, and held that position until 1907, when he was relieved of his office under circumstances which have never yet been satisfactorily explained. As Ulster he showed much energy and initiative. He founded the heraldic museum in Dublin Castle, and the offices of Dublin and Cork Herald were revived at his instance. The ceremonial for the State Visits of Queen Victoria and King Edward was largely under his direction. He was knighted in 1896 and made a K.C.V.O. in 1903. On ceasing to be Ulster he retired to his home in County Kerry. He appears never to have taken any active part in the affairs of this Society, but he was a trustee of the National Library of Ireland and had formed a large collection of book-plates, which it is to be feared was destroyed with the other contents of his house.

An obituary notice of *Le Comte Robert de Lasteyrie*, who died on 29th January, appears on p. 242 of this number of the *Journal*.

An obituary notice of *Dr. Robert Munro* has already appeared in the *Journal* (p. 76). He was never a Fellow of the Society, but for many years was a Local Secretary for Scotland, and was one of the most prominent of Scottish archaeologists.

Although the Fellows have already had the opportunity of expressing their regret at the death of *Mr. George Clinch*, an obituary notice of whom appeared in the April number of the *Journal* (p. 145), the Council cannot allow this report to be submitted without once again expressing its great regret at the death of one who for twenty-five years had been the loyal servant of the Society.

The Treasurer made a statement on the general state of the Society's finances and presented his accounts.

The scrutators having handed in their report the following were declared elected as Officers and Council for the ensuing year: Sir Hercules Read, *President*; Mr. William Minet, *Treasurer*; Mr. C. R. Peers, *Director*; Mr. Ralph Griffin, *Secretary*; Lord Carmichael, Sir Martin Conway, Mr. O. M. Dalton, Rev. E. E. Dorling, Sir Vincent Evans, Archdeacon Gibbs, Mr. A. F. Hill, Mr. C. H. Jenkinson, Sir Matthew Joyce, Colonel J. B. P. Karslake, Mr. C. L. Kingsford, Lord Northbourne, Mr. H. W. Sandars, Mr. C. O. Skilbeck, Major Harley Thomas, Mr. Edward Warren, and Sir Lawrence Weaver.

The meeting then adjourned until 8.30, when the President delivered

Stonehenge : Interim Report on the exploration

By LT.-COL. W. HAWLEY, F.S.A.

AFTER the death of Sir Edmund Antrobus of Amesbury Abbey, certain properties, including Stonehenge, were in 1915 sold by his representatives. Fortunately for all students of archaeology, Stonehenge was purchased by Sir Cecil Chubb of Bemerton, who generously presented it, together with some thirty acres of adjoining land, to the nation. The acquisition of this additional land has made it possible to set back an unsightly fence and divert a cart-track some distance from the monument. It was at once recognized by H.M. Office of Works that the monument required immediate attention, and it was therefore decided, by the advice of the Chief Inspector of Ancient Monuments and the Ancient Monuments Board for England, that a careful examination of it should be made, and work for its preservation taken in hand. It was decided that the stones which were in a dangerous state should receive attention first, and then that those which had fallen in recent times should be re-erected, care being taken that all appearances of restoration should be avoided. By the courtesy of the Office of Works, the Society of Antiquaries was given every facility for carrying out a scheme of archaeological research on the site during the progress of the work, and the writer was appointed the representative of the Society. Preparations were begun in September 1919, but were much retarded owing to difficulties of transport and the delay in erecting two huts and the assembling of the large equipment necessary. It was not until the end of the year that work was actually begun.

In recording the finds made during the course of the exploration of the site, no account has been taken of the modern rubbish unless it has been of special interest or was found at an unusual depth, as it does not concern the ancient history of the monument. At one time coursing meetings were annually held near Stonehenge, and, before each meeting, glass and other noxious rubbish likely to hurt the animals' feet were collected and buried, which will partly account for some of the modern objects found.

As a preliminary, mention may be made of the excavation of some prop-holes beyond the outer circle, as they give an idea of the state of the soil about the monument. The first hole

his Anniversary address (p. 167), at the close of which the following resolution was proposed by Mr. C. L. Kingsford, V.P., seconded by Mr. L. L. Duncan, and carried unanimously:

'That the best thanks of the meeting be returned to the President for his address and that he be requested to allow it to be printed.'

The President signified his assent.

Thursday, 12th May 1921. Sir Hercules Read, President, in the Chair.

Mr. Bryan Thomas Harland was admitted a Fellow.

Mr. H. H. King exhibited a twelfth-century ivory carving recently discovered at St. Albans.

Captain J. E. Acland, F.S.A., exhibited some Roman spoons discovered at Somerleigh Court, Dorchester.

Major C. A. Markham, F.S.A., exhibited a late sixteenth-century helmet from Braybrooke Church, Northants.

The above papers will be published in the *Antiquaries Journal*.

Mr. R. W. Crowther exhibited the seventeenth-century communion plate belonging to Hare Court church, Canonbury.

measured 2 ft. 6 in. by 1 ft. 6 in. After removing a few inches of humus we passed through earthy chalk rubble until solid chalk was met with at a depth of 3 ft. The rubble was full of modern rubbish such as broken glass, crockery, pipe-stems, and other things, which decreased in number from the top. It also contained 75 sarsen chips, 70 of foreign stone (or bluestone), 9 fragments of bone, 7 of Bronze Age and 4 of Romano-British pottery, and 6 rough pieces of flint showing signs of working. The second hole was of the same area, and solid chalk was met with a foot below the surface. In addition to modern rubbish, it gave 5 sarsen chips and 18 of foreign stone. Two similar holes were dug in December 1919, both 18 in. deep. In addition to modern rubbish the first yielded 5 sarsen chips and 28 of foreign stone; the second, 1 sarsen chip and 40 of foreign stone, 11 small pieces of Romano-British pottery, and a small third brass of Tetricus, almost illegible.

It was determined to begin work on stones nos. 6 and 7 on the south side of the outer circle, which had been propped up for a long time and appeared to be most in need of attention. No. 7 listed towards the south and no. 6 in the opposite direction; and by their combined movements the lintel was forced out of position to such an extent that, at one end, only a small portion of it rested on the upright stone below (fig. 1). On 27th November this lintel, weighing between six and seven tons, was safely lifted off (pl. III), after having been encased in a timber cradle and protected with felt. We then had to wait until 3rd December, when the upright stone, no. 7, having been similarly encased, the removal of the surrounding soil was begun. Our measuring frame, though larger, was exactly on the same principle as that described by Mr. Gowland in his 1901 report on Stonehenge, and proved a most useful and ready method of recording the position of things found in definite areas. We also used the same datum line as he did, in order that the past and present work might be uniform. Excavations were begun in front of the outside face of no. 7 stone, that is on its south side, in an area of about 7 ft. by 4 ft. 6 in. The soil was removed in layers according to datum level, usually 6 in. at a time.

The first layer of earthy chalk rubble, rather flinty, contained 26 sarsen fragments or chips, 40 of foreign stone, 8 roughly worked flints, 4 flint implements, 10 bone fragments, a piece of charred wood axe-marked, 5 fragments of Romano-British pottery, 1 piece of burnt clay and 1 of brick, and 1 piece of glazed earthenware.

The next layer in the same, but less flinty, soil gave a sarsen

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Two Relic-holders from Altars in the Nave of Rievaulx Abbey, Yorkshire

By C. R. PEERS, M.A., Secretary.

[Read 21st April 1921]

THE Cistercian Abbey of Rievaulx owes its foundation to a mission from Clairvaux, sent to England under the direction of St. Bernard in 1131. Waverley Abbey in Surrey, and Tintern in Monmouthshire, daughter houses of L'Aumône, were already in existence, having been founded in 1128 and 1131, the first Cistercian houses in England. A beginning having thus been made in the South, it was no doubt a matter of policy that the order should be planted in the North also, and Rievaulx came into existence, the first of that splendid company of Yorkshire Cistercian houses which numbers Byland, Fountains, Jervaulx, Kirkstall, and Roche among its members. A benefactor was found in Walter le Spech or l'Espech, who gave in his charter of foundation nine carucates of land in Griff and Tilstone, and with this endowment the monastery was started, receiving no considerable increase of revenue till 1145, when the founder added Bilsdale to their lands. In spite of this Rievaulx must have grown quickly, for colonies went from it to inaugurate new monasteries at Melrose in 1136, Warden in the same year, Dundrennan in 1142, and Revesby in 1143. But a grant of a site at Rushen, given by Olaf, King of Man, could not be accepted for lack of any one to send to take possession.

Although a cartulary of Rievaulx is extant, and has been printed, no record of the construction of its buildings has come down to us, except in the details of the buildings themselves. The place is

hammer-stone, 19 sarsen fragments, 41 of foreign stone, 2 roughly worked flints, and 1 fragment of Romano-British pottery.

In the next layer, of earthy chalk-rubble, were a large block of sarsen, 2 sarsen hammer-stones, 13 sarsen chips, 17 of foreign stone, 7 roughly worked flints, 5 pieces of Romano-British pottery, 1 Romano-British boot-nail, 2 pieces of bone, and traces of burnt wood ashes.

The fourth was of loose chalk rubble, and we came to the chalk rock sloping down towards the stone: near the stone the rubble was mixed with a little clayey earth.

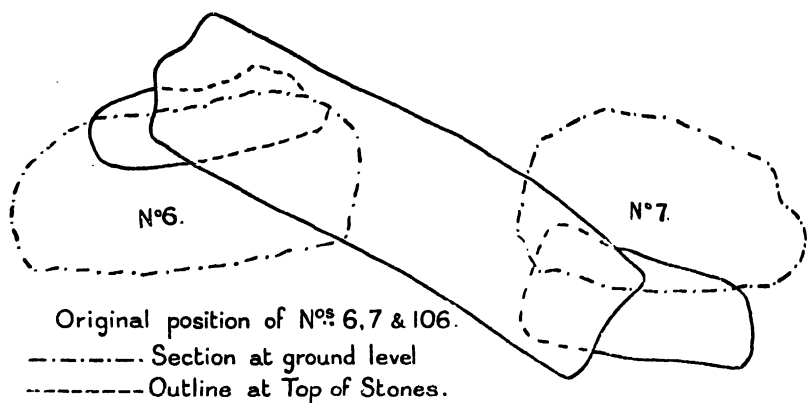


FIG. 1. Position of stones 6 and 7 and of lintel before work was begun.

In this layer were 4 pieces of hammer-stones, 53 sarsen chips, 31 of foreign stone, 1 roughly worked flint, 2 bone fragments, some burnt wood ashes, and 9 large sarsen blocks, used for packing the stone on that side, occupying a space of about 4 ft. along the face and extending 18 in. outward from it. We lifted out four of these blocks.

In the fifth layer the sloping chalk rock ended in a well-defined line, and descended perpendicularly like a short wall from 1 ft. to 14 in. deep and 9 in. from the stone: a little loose rubble above the wall contained twelve sarsen chips. This we took out with the five remaining packing blocks. These and the four previously removed were surrounded with clayey rubble and placed against the stone in a line with the top of the chalk wall, their lower portions being wedged between it and the stone. All the blocks showed traces of fire and so did the stone-face opposite them. Clayey rubble mixed with a quantity of wood ash filled the remainder of the space down to bed-rock, in which we discovered a round hole, $4\frac{1}{2}$ in. in diameter, descending into the chalk rock.

typically Cistercian, a place far removed from men, as the Statutes direct, and even now none too easy of access. The narrow dale in which the Rye flows runs north-west and south-east, and when the abbey was founded, the river ran on the east side of the valley—not as now on the west—leaving only a narrow and cramped site for the buildings at the foot of the steeply rising eastern slopes. The valley floor, moreover, such as it was, was doubtless marshy, and so it came about that the church was not set out on a line east and west, but nearly north and south, with the conventual buildings on what in a normal case would be the south side, but at Rievaulx the west. In describing them, however, the extant documents ignore this irregularity, speaking of the east end of the church, etc., and it will be convenient to continue the practice here. It appears that the first building to be set up in a permanent form was the church, and of this great part of the transepts and the lower parts of the nave piers and walls remain. It can claim to be the earliest large Cistercian church in Great Britain, the small aisleless churches at Waverley and Tintern, represented by little but foundations, being in a class by themselves. Till last year the nave was 10 ft. deep in fallen masonry and soil, but is now cleared from end to end, and proves to have been of nine bays, with plain piers 4 ft. 10 in. square, their inner angles splayed off at 5 ft. from the floor, and carrying pointed arches round which the splay is continued. Each bay of the aisle was covered with a pointed barrel vault running at right angles to the axis of the nave, and springing from plain round-headed transverse arches across the aisle. The whole may be compared with the nave of Fountains Abbey, especially as regards the aisle vaults, but is much plainer in every way and presumably earlier. If the date assigned to the work at Fountains, before the fire of 1147, is right, then the first church at Rievaulx should belong to the earliest years of the abbey's existence, and can hardly date after 1140. The buildings round the cloister are not yet fully cleared, but it is possible to deduce that the present chapter-house replaced an earlier one about 1150–60, that the dorter (dormitory) range and reredorter date from 1160 to 1180, and that an original east and west frater (refectory) was replaced early in the thirteenth century by the splendid north and south frater which still exists. The cloister was built in the last quarter of the twelfth century, and the western range, which is curiously small in comparison with the other buildings, is of the same time. The infirmary hall is also of the end of this century, and is an early example of its kind: this being usually, it would seem, the last of the monastic buildings to be built in permanent form.

Shortly afterwards we discovered four more holes, all more or less in a line and parallel to the low chalk wall ; and one, at the south corner of the stone's base, or what we have sometimes called its toe, was 6 in. in diameter and descended 2 ft. A small portion of the toe appeared to have been cut away to receive the side of a post. All of these were evidently post-holes, and the wood ash around seemed to signify that they had been burnt.

This state of things may perhaps be accounted for as follows. The stone in common with the rest in the outer circle was erected from the outside. It was slid down the incline we noticed until its base was just over the hole : it was then drawn upright against a prop behind and held by four guy-ropes.

The posts were then driven in to steady it in front, helped perhaps by wooden baulks at the side and back, where the chalk rock rose higher. The stone would perhaps be not far out of its required position, and the peculiar shape given to the foot would enable the workmen to adjust it inch by inch. Then the packing blocks would be securely wedged around it.

The protruding posts would then have to be dealt with. To extract them would shake and disturb the stone : to leave them would result in their rotting and leaving empty cavities, which would have loosened the soil later on ; so they were burnt and all interstices filled in with clayey rubble, over which came the other rubble we found, well rammed in.

The face of the stone was now exposed to view, its base being 5 ft. from ground-level. From just below ground-line on the right, the side of the stone took a curve downwards, its central axis being met by a lesser curve from the opposite direction. The lower front was a good deal undercut, and at the extreme left the base ended in a blunt point or toe : this toe was drawn off the ground, the tilt having produced a cavity below it (fig. 2).

As its stability was doubtful, two additional steel ropes were secured about the stone, and a portion of its weight was taken by the crane.

On 16th December an excavation was made on the west side of this stone in an area 4 ft. long by 3 ft. wide, and to a depth of about $2\frac{1}{2}$ ft., in order that wooden baulks might be inserted to overcome the pressure from the lower part of the stone in that direction, which prevented our going deeper at that time. In the first layer below humus we got 8 sarsen fragments, 96 of foreign stone, 6 of bones, a horn-core, 3 fragments of Romano-British pottery, part of an armlet of that period made of two-strand bronze wire, and a small hone of the same period.

The second layer gave 1 fragment of a sarsen hammer, 42 sarsen

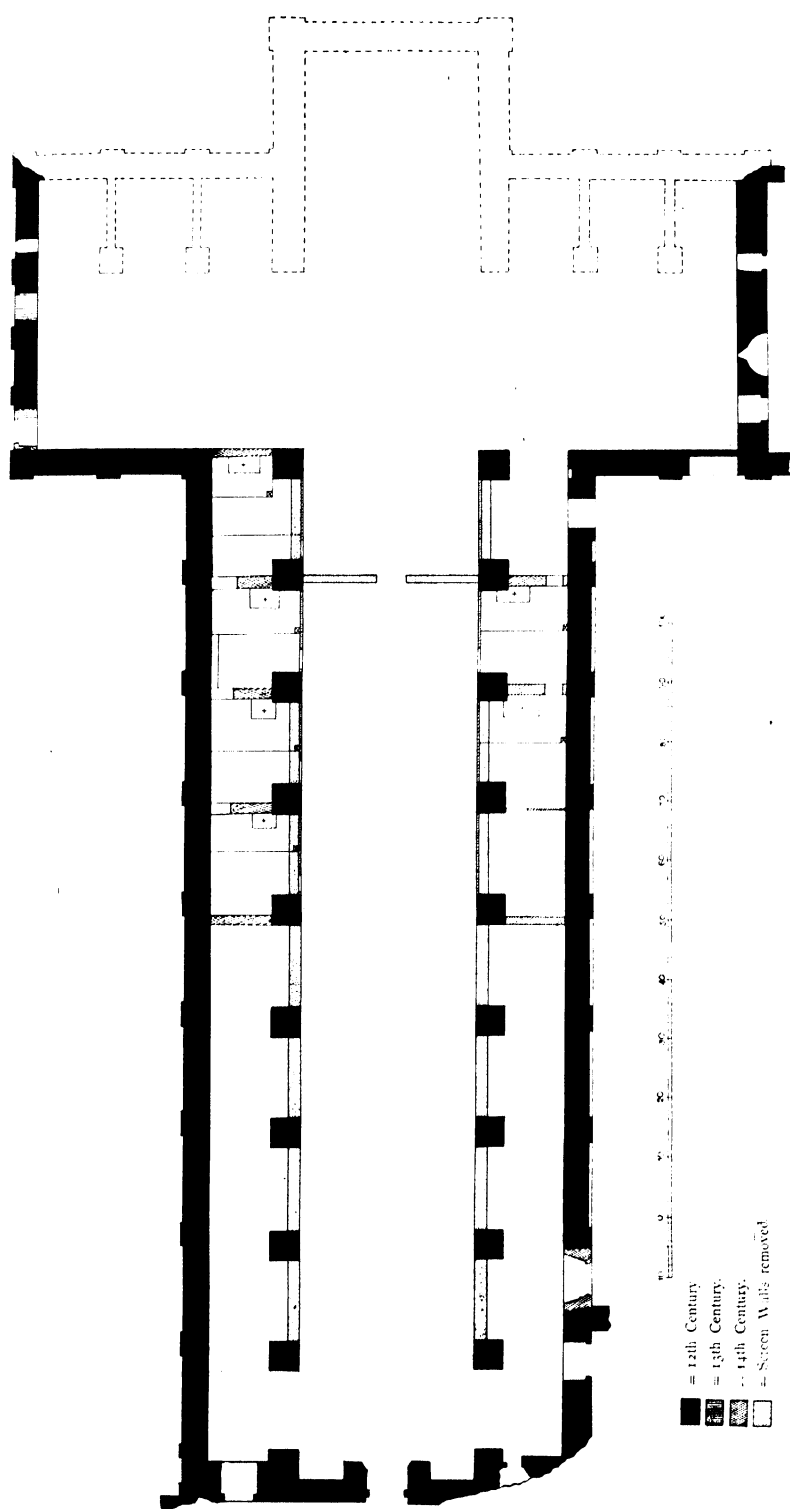


FIG. 1. Rievaulx Abbey: plan of first church, showing 14th century alterations in nave.

chips, 266 of foreign stone, 6 fragments of Romano-British pottery, 3 pieces of glazed earthenware, an iron nail and buckle, and one or two indefinite fragments of brass or bronze.

The third layer gave 2 small sarsen hammer-stones, 22 sarsen

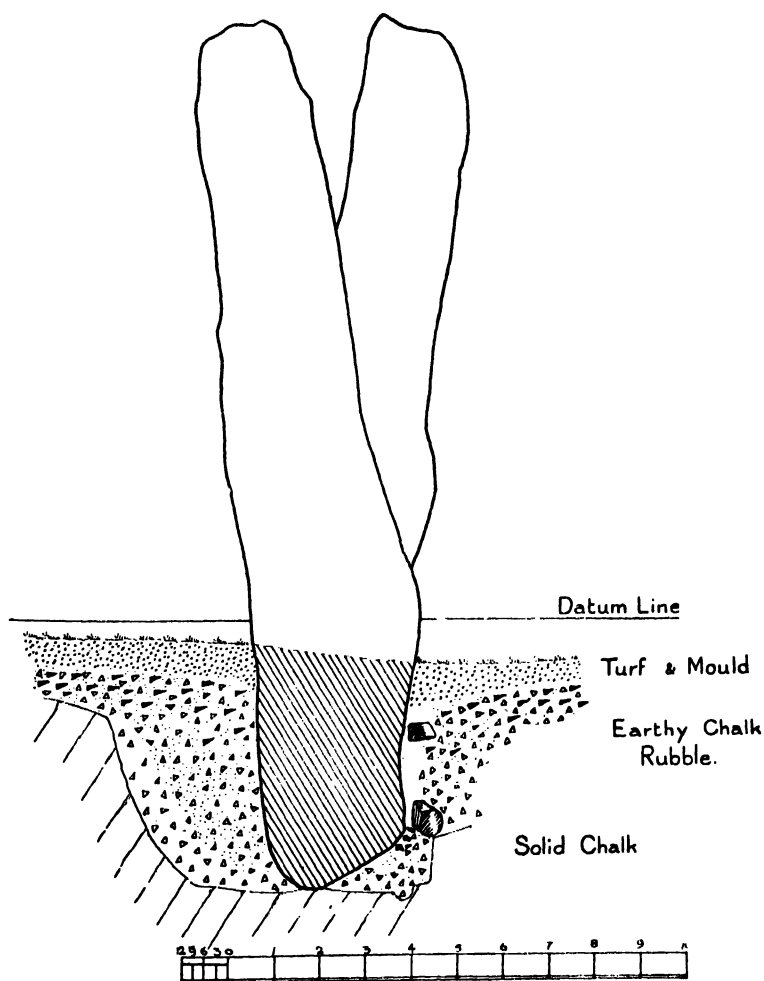


FIG. 2. Section through stone 7 looking NE. Stone 6 in the background.

chips, 95 of foreign stone, 3 bone fragments, 4 roughly worked flints, and a piece of glauconite (green sandstone such as Old Sarum was built with, found locally).

The wooden baulks were then inserted, and we did not return to this spot until 20th January, after the stone had been made

safe, when we removed the remaining soil down to the base of the stone on the west.

The fourth layer contained 9 sarsen fragments, 33 of foreign stone, 7 small pieces of glauconite, and 1 piece of Romano-British pottery.

The last layer contained 20 sarsen fragments, 65 of foreign stone, 3 rough flints, and 3 bone fragments. We also came upon the packing stones, five in number, three being large blocks of glauconite and two of sarsen : these were at 4 ft. 6 in. from the surface, and for another foot there was clayey rubble with nothing in it down to the chalk rock.

Nearly all our excavations were conducted in the manner just described. At first the stones, encased in cradles, had steel rope guys attached to them on all sides, anchored to the ground : but later iron girders were added to the cradles and placed longitudinally below the lowest timbers at their sides. The projecting ends of girders had jacks placed under them on thick iron plates, supported when necessary by concrete bases. This arrangement gave perfect security, besides being a ready means of moving the stone in any direction.

Up to this point I have given an inventory of objects found in each layer of our excavations. I shall now mention only the interesting finds, for there is a tedious recurrence of chips and other things, all the soil within the area of our frame having been sieved.

Our next excavation was one along and against the back of the stone on the north. In the upper soil a foot below the surface we came upon some rotted timber, evidently remains of a timber support between stones 6 and 7, existing in 1904. We found sarsen chips as usual, and foreign stones, greatly in excess of the sarsen, and on the north-east came upon a sarsen block at 17 in. from the surface, and afterwards two more 10 in. lower down, and still lower down, at 39 in., was a block much larger than the others, a little to the right of those above and under the curve of the stone, wedged between it and the side of the hole it stood in.

About a foot from this block and near the stone was a farthing of George III. This coin, when lost, had probably fallen close to the stone. The stones become heated by the sun, causing the soil to recede sufficiently to allow small objects to drop a considerable distance. The recurrence of this year after year, assisted by long droughts and other factors of movement, causes small things to descend to low levels and shows what reliance can be placed on small metal finds.

We found other sarsen blocks placed nearly opposite the middle

was needed. As time went on illiteracy became less general, and with the gradual weakening of the monastic impulse, which is so much in evidence from the second half of the thirteenth century onwards, the *conversi* became fewer and fewer, till they came to an end in the latter part of the fourteenth century.

A familiar feature in the planning of Cistercian churches is the separation of the aisles from the main span by masonry walls, to enclose the quires of monks and lay brothers. These walls may be either built with the structure of the church and bonded to the piers of the arcades, or added afterwards. At Fountains they are built separately from the nave piers, but the moulded pier-bases stop against them, showing that they were designed so from the first. At Rievaulx the plinths of the piers are of the same section on all four sides, and the screen walls would have left no trace of their existence if it had not been that after they were added the piers were whitewashed, the surface against which the walls abutted of course remaining untouched. This white-wash was no doubt part of the original finish, and demonstrates that screen walls existed in the first, third, fourth, fifth, sixth, seventh, and eighth bays of the nave. Their absence from the second bay shows that this must have been the position of the twelfth-century retroquire, with the pulpitum on the east; the piers against which it was set being cut away for bonding. At some time after the enlargement of the church in the thirteenth century the pulpitum was moved eastward and set between the eastern piers of the tower, and here it remained till the Suppression, appearing in the inventory quoted above as the roodloft in the chancel. There were, at this date at least, no screens enclosing chapels to the west of it, such as are shown on the plans of Fountains, Kirkstall, and Jervaulx, but the site of the original twelfth-century pulpitum was occupied by a wooden screen standing on a stone base, noted in the inventory as 'the parclose overthwart the body'. This screen had a doorway in the middle, and therefore could not have been a roodscreen: it marked the western limit of the part of the church used for the monastic services, the nave having become, as at Fountains, an unoccupied area, except for some timber lofts at the west end. If any other altars than those now found existed, they have left no trace. The inventory, however, is concerned with movable fittings, and only mentions altars in connexion with them; so that if the rood altar had no tables or images—or if they had been already removed—there would be no need to mention it. For the same reason two altars west of the pulpitum may have still existed, without being noticed in the inventory. Some of

of the face: two at 15 in. from the surface, one at 19 in., and two at 41 in.; and the remainder of the soil was chalk rubble to rock bottom, of much the same appearance as that on the other sides. In this excavation we only got two roughly worked flints and two small pieces of Bronze Age pottery, both about 30 in. from the surface.

Excavation on the remaining east side gave the usual *débris* and chips; and at 15 in. below the surface we got seven small pieces of Romano-British pottery and a small fragment of Samian, also seven roughly worked flints: lower down, at 23 in. from the surface, we found two sarsen hammer-stones. Below this, and chiefly under the curve of the stone, were six packing blocks of sarsen; three of them at 27 in. below the surface, and the others at 37 in., 39 in., and 50 in., distributed along the under side of the curve in chalk rubble. This completed the excavation of no. 7 stone (fig. 3).

We began work upon stone no. 6 by carrying an excavation along its north face down to the foot in order to ascertain the shape of the buried portion, which we found came to a pointed end at 4 ft. 6 in. from the ground level. Its east and west sides curved fairly equally to the axial line, the eastern curve being convex and the western concave. This excavation yielded little but a sixpence of Elizabeth at 25 in. Foreign stone chips were greatly in excess of sarsen (131 to 18). There were a few small pieces of Romano-British pottery at 15 in. below the surface, and there were no packing blocks, only chalk rubble all the way down.

The excavation on the south side was very different. In our upper layer from 12 in. to 15 in. below the surface were 2 pieces of Chilmark oolite (ragstone) about 5 in. or 6 in. wide, 14 roughly worked flints, 2 small pieces of Bronze Age pottery, 6 of Romano-British ware, and an oyster shell. At 18 in. below the surface we got a small sarsen hammer-stone. At 23 in. were two similar hammer-stones and one made of foreign stone. At 30 in. we came to packing stones; three of them against the upright stone, two of which were braced from behind by large slabs of Chilmark ragstone set on end and at right angles to them. There were also two more ragstone slabs to the west of these, with edges towards stone no. 6, which had receded a little from them. These extended along nearly the entire front and were set in a mass of extremely hard earthy chalk, like concrete, extending down nearly to the base of the stone, around which was a mass of burnt wood ashes in fine earth (fig. 4).

We next investigated the east side of stone no. 6, and found the

the fittings had certainly been taken out of the church before this time, as is shown by the mention in the inventory of 'imagys and tables gyldyd that came out of the church', in the chambers at the south end of the hall. It must also be remembered that the tower over the crossing had fallen a few years before, and the chapels and altars under the tower may well have been destroyed at the time of the fall.

The precise date at which the pulpitum and monks' quire were moved eastward is not certain. It may have taken place at the completion of the thirteenth-century enlargement of the eastern parts of the church. But the equally spacious enlargement of Fountains in the same century had no such result, the monks' quire remaining in its original position to the end. It is possible that the whole rearrangement took place at one time, in the second half of the fourteenth century, when the lay brothers ceased to exist, and with them the need for a second quire in the nave. The stone base of the screen between the second pair of piers in the nave is of this date or later: the cross walls in the aisles, and the altars, give no certain indication of date. To the late fourteenth century, however, belong the making of a doorway into the church from the west walk of the cloister, where no doorway previously existed, and a curious alteration of the original doorway from the east walk of the cloister, by which the wooden doors were moved from their normal position on the south side next the cloister and rehung on the north side of the wall next the church. The fine 'holy water stone of marbyll' just east of the door dates from the same time. One more alteration may be noted, namely, the insertion in the west face of the north-west pier of the tower of a moulded base-stone, on which must have rested a shaft carrying a corbel or niche for an image.

With the removal of the monks' quire from the nave, no part of the nave aisles would be needed for processions. The arrangement of the altars in the chapels shows, moreover, that at the time of their building the blocking walls in the bays of the nave arcades had also been removed, and this could hardly have taken place before the lay brothers' quire had ceased to exist. Wooden screens took their places, as the inventory states, and the chases in the plinths of the piers remain to show where they stood. The nave was paved with glazed tiles, which were taken up at the Suppression, and only a few now remain. All the screens and carved tables in wood, stone, and alabaster, with the images, were taken away, as was the glass and metal work of the windows and the lead and timber of the roofs. The stonework, except that of the west window, which was a recent insertion, was left in

interval between it and the side of the hole was narrow and filled with chalk rubble all the way down. In the upper layer we got

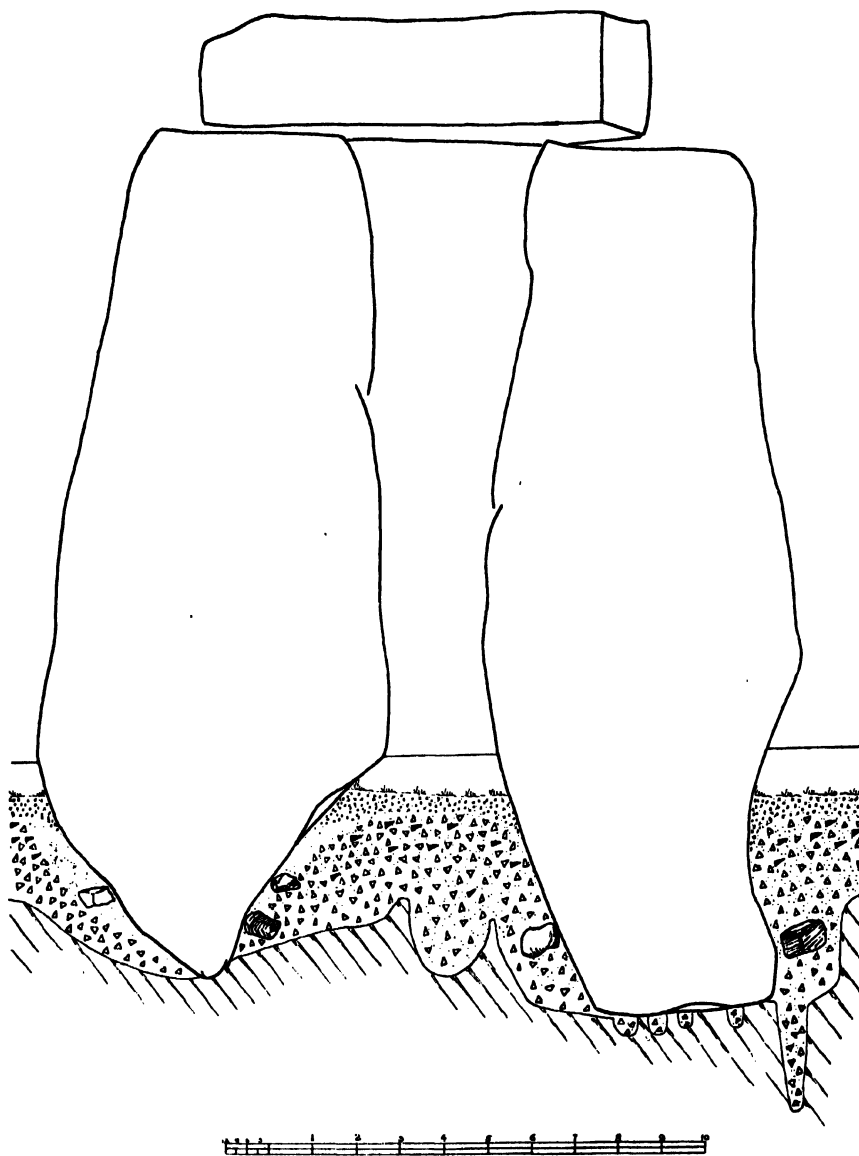


FIG. 3. Section through stones 6 and 7 after excavation, looking east :
post hole on right.

three small pieces of Romano-British pottery, and lower, at 27 in., was a sarsen implement, and still lower, at 3 ft. from the surface,

position, and must have been stolen piecemeal or allowed to fall down. It is probable that the plundered ruins of the nave did not stand for many years before they finally collapsed, as the plaster on the recently uncovered walls and piers was found in fairly perfect condition, showing traces of colour in places. Some blocks of wrought stone, fresh and unweathered, and evidently of quite recent working at the Suppression, were laid in order against the wall of the north aisle, ready for a removal which never took place; and at the west end of the nave four of the great pigs of lead into which the roofing of the buildings had been melted down, had been hidden by falling masonry from the agents of the king. The stone altars in the chapels, which could easily have been removed, were in several cases nearly perfect. The two with which this paper is mainly concerned are the second and fourth in the north aisle. They are complete, except that the slab of the fourth altar is damaged at one corner, while in the second altar about half the slab is missing. They are built in courses of squared masonry, originally covered with a thin coat of plaster, and in the middle of the top course in each altar, just below the slab, a stone notably smaller than the rest is to be seen.

These stones proved to be less than 3 in. thick, and served as the front side of a small plastered recess in the body of the altar, to which the mensa or altar slab formed the cover. In each recess stood a cylindrical box of lead; and both boxes are here illustrated (fig. 2), but before I describe them further it is necessary to summarize the development of the ceremony in which they played a part some five centuries ago.

The history of altar-relics is a long one, with its origin in pre-Christian times. The direct ancestor of the Christian saint is the pagan hero, whose cult centred round his supposed or actual grave, where he was held to be present in a special manner, able to receive the gifts and marks of honour offered to him, to accept prayers, and to help those who went to him for succour. The spot in which he was buried was a holy place. In many instances there was raised upon it a sacred building dedicated to him, a chapel or sometimes a temple. Above the grave or close to it stood the altar upon which yearly offerings were made on his feast day, and in some rare cases daily offerings, according to the impulse of individual worshippers.

The offerings were of the same kind as those by means of which the gods of the lower world and the dead were honoured. Meals were also held, as in the ordinary cults of the dead, at the graves of heroes.

In the same manner the grave of the Christian hero, the

were three blocks of packing stone tightly wedged with rubble between the stone and chalk rock. One of the blocks was a very large flint, the other two sarsen; and they extended north to south under the curved bottom.

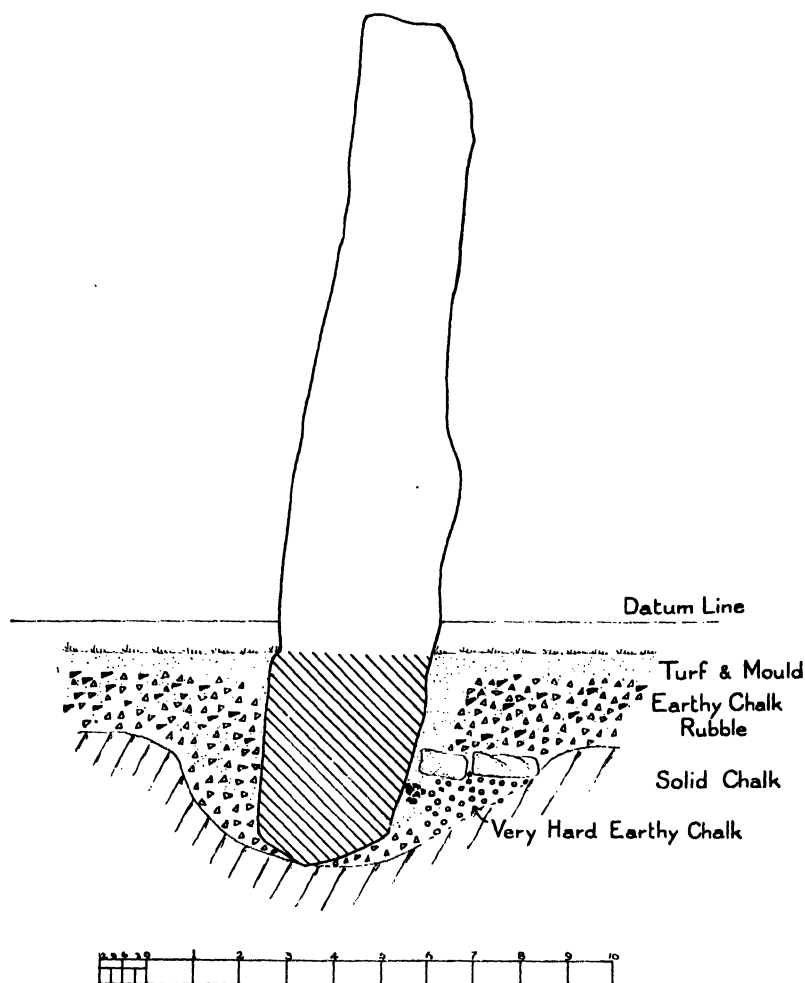


FIG. 4. Section through stone 6, looking NE.

Our last excavation of stone no. 6 on its west side was very much the same as that on the east, except that there were only two packing blocks, one at 26 in. below the surface and the other immediately under it, at 36 in. In the upper soil was one piece of Romano-British pottery and four roughly worked flints. The little soil remaining between the two stones was removed,

martyr, was the meeting place of the community. His festival day was celebrated by bringing gifts to the tomb, and by the holding of the Sacred Meal there. The table at which the meal was held was essentially the altar, and the celebration of this Meal was the most effective means by which to remain in immediate communion with the martyrs, who were present in spirit. The Lord's Supper had taken the place of those funeral meals which the heathen were accustomed to hold in honour of the dead. It was celebrated, if not actually at the coffin of the dead, at any rate over his grave, and incorporated many of the ideas which the heathen had associated with their feasts of the dead. The importance of the altar for the cult of martyrs is shown very clearly by the fact that such graves as were regarded as too doubtful or too unimportant to be marked by a church or by a simple chapel, were indicated by an altar erected above them. An altar was essential wherever there was a question of honouring a martyr. For these reasons the relics of the martyr could be placed in no other part of the church than that in which the community celebrated their Meal.

The development of this practice soon brought it about that relics became essential for altars, and already at the beginning of the fifth century the fifth Council of Carthage decided that no altar was to be retained unless it contained relics. The further development that no church was to be hallowed without relics followed naturally from this. But as more and more churches were built, the provision of relics became increasingly difficult, and the possibility of consecration without them had to be faced. Three pieces of the Host were allowed to be used instead, but the practice was never generally approved, and the Pontifical of St. Dunstan (tenth century) contemplates the consecration of altars without relics, when it is impossible to procure any.

The position of relics in an altar depends on the form of the altar. There are two main forms, one in which the slab is carried on pillars, which may be called the table-altar; the other in which the slab rests on a block of masonry, which may be called the tomb-altar. In the latter the relics are normally built into the masonry block, or stipes, the body of the altar; in the former they are either let into a sinking in the mensa or slab, or sometimes inserted in the pillars. The recess or sinking containing the relics is called the sepulchrum, confessio, or confessio. It is closed by a slab or plug of stone, known as the seal or sigillum, or simply the tabula.

Durandus in his *Rationale Divinorum Officiorum* (late thirteenth century) explains that if relics are put in a sepulchrum on the top of the body of the altar, the mensa itself may be used

but did not reveal much of importance. On the top was a long baulk of rotted timber, a portion of which we had already met with on the north side. Chalk rock was found rising between the stones at 3 ft. from the surface, and in it midway between the

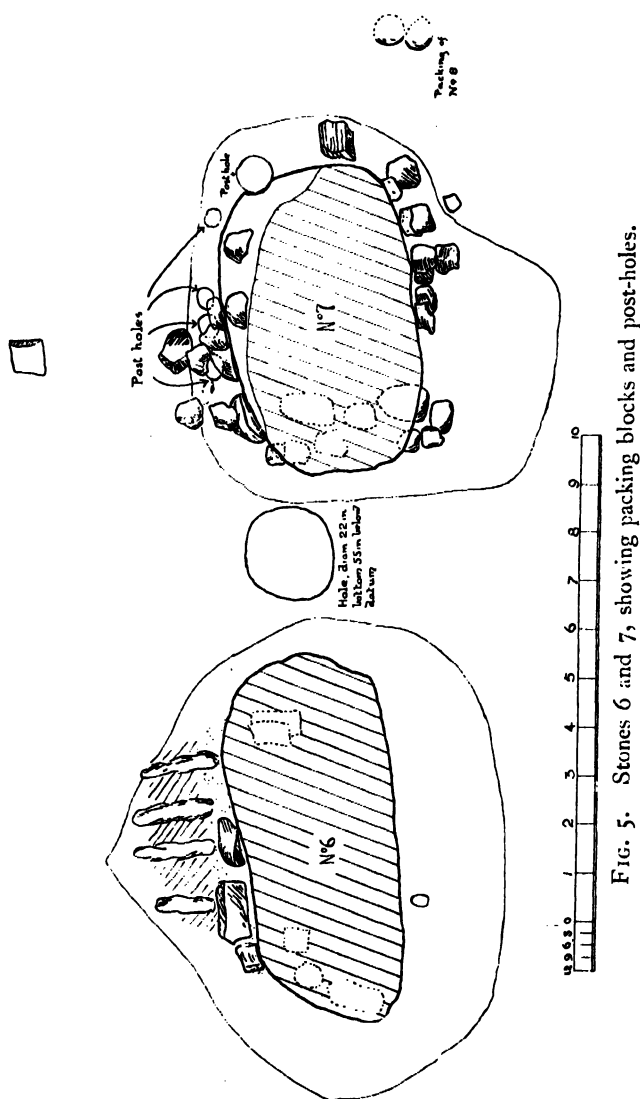


FIG. 5. Stones 6 and 7, showing packing blocks and post-holes.

stones was a bowl-shaped cavity, which might have been made when originally erecting the stones, or be merely a result of modern propping (fig. 5).

Some of the areas excavated within our frame, apart from those

as the seal. It is usual, he says, at the consecration to put in the sepulchrum a writing giving the name of the consecrating bishop and other bishops present, with the name of the saint in whose honour the altar is hallowed, and also of the patron saint of the church, if the church also is being hallowed at the same time: also the year and day of the consecration. After the seal is fixed, it is essential that the masonry joints or stonework fixing it should not be broken, and if so, the altar must be hallowed anew.

In the fourteenth-century English pontifical in the British Museum, known as Lansdowne 451, the process of placing relics in an altar is thus described. The altar-slab is to be suspended above the body of the altar, two cubits above it, so as to be easily lowered on to it. A recess or sepulchre is to be made in the middle of the altar, in its upper part, a quadrangular opening *ad magnitudinem palmarum*, a hand-breadth either way, lined on all sides with slabs of wood or marble, and in this the relics are to be placed. There must also be another slab, called the seal, made to fit the sepulchre and to be laid over it and the relics. The use of the mensa itself as the seal is apparently not contemplated. The rubric goes on to say that there are other ways of enclosing the relics, but that often no relics are in fact enclosed, seeing that ancient relics are now very scarce and very few new saints have been canonized in modern times.

An alternative method is then noted, which, it will be seen, is that which has been employed at Rievaulx. A square fossa or recess is to be made in the altar *usque medium*, with an opening either in the front, back, or side of the altar, so that it can be closed by a stone slab well plastered and set. The recess—also called the confossio—is anointed with chrism crosswise from the four corners, and three grains of incense are put in it with the relics. The slab—here called the tabula—is also crossed with chrism, and put over the relics and set in mortar. Nothing is said about a box or vessel to contain the relics.

It is worthy of note that in the illuminated initial letter of this rubric, a bishop is shown hallowing an altar in a manner which is not provided for in the rubric. A rectangular recess has been made in the front edge of the mensa of the altar—which is a 'tomb-altar' with panelled body—and the bishop holds in his hand a gilded object made to fit the recess, which must be at the same time the sepulchrum and the sigillum, the relic holder and the stone which encloses it.

Another form, in which the same stone serves as sepulchrum and sigillum, has been recorded in the Society's *Proceedings*, vol.

around the stones, are worthy of mention. On the south side of no. 7 there appeared to be an incline towards the stone, cut in chalk rock, intended no doubt for moving the stone down to its site for erection; and it is possible we may have the same arrangement in front of no. 6. With this exception the chalk rubble was more or less at its normal level over the solid. The area within our frame close to the north side was remarkable for the great quantity of foreign stone chips in it, especially the north-east corner, where an area 10 ft. by 5 ft. produced 700 of them to only 85 of sarsen; and an area a little west of it yielded 182 of them to 2 of sarsen, perhaps the trimmings of no. 33 of the inner circle which was close at hand.

The shallow area along the south side of the frame contained a number of objects of the Romano-British period, and produced 92 sherds of that date, an iron awl, a small long hammer-head of iron resembling those used by jewellers or clockmakers at the present day, a turned bronze ring, part of a shale bangle, and part of an iron knife and of a sickle: these two, although doubtful, resemble those found in British villages of the Roman period.

When our excavations were completed steps were taken to secure the stones permanently. The jacks had already been placed under the girders, but before they could be used it was necessary to prevent the stones slipping down in their cradles, so two steel ropes were passed under each stone and secured by eye-bolts to the lowest timbers. The stones were then practically slung upon the girders, the steel slings taking the weight (pl. IV). First of all it was necessary to make a firm bed to sustain the weight of the stones, as it was found that the chalk rock below them was very loose as a result of their gradual displacement.

Whilst the stones were held on the jacks the crumbled chalk was removed and replaced by a 3 ft. bed of reinforced concrete up to the original level, carefully calculated previously. Sufficient time having been given for the concrete to harden, the stones were lowered to it, and then came the most important and tedious part of all, namely, to get the stones into their correct positions. The lintel was slung up and lowered upon them. So carefully had all measurements been made that the lintel needed very little adjustment. A quantity of reinforced concrete was placed on all sides of the stones in a long and broad continuous trench and brought nearly to ground-level, allowing sufficient depth for turf and a bed of humus below it. When all was set firm, the lintel was again raised so that the dowels could receive leaden caps, which had been cast in plaster moulds.

xi, p. 245. The stone was exhibited on 27 Jan. 1887, having recently been found in excavations at the Cistercian abbey of Roche. It was a cube of 9 in. with a rough oblong sinking in one face 4 in. by $2\frac{1}{8}$ in. and nearly 2 in. deep, closed by a small piece of stone. This being removed revealed a small hollow containing a little roll of sheet lead, in which were found a splinter of bone, a little dust, and an iron ring broken in two pieces. Mr. Micklethwaite identified the stone as the confessio or receptacle for relics deposited in an altar at the time of its



FIG. 2. Leaden relic holders and earthenware pot from Rievaulx Abbey ($\frac{1}{3}$).

consecration. This had clearly been built into the body of the altar, and not into the mensa.

Nothing is said in these rubrics of any box or vessel in which the relics are to be enclosed, but it is obvious that some form of holder must have been common, though it was not essential. Capsae of metal, as receptacles for relics exhibited in churches, were normal at all times, and though I can find no English parallels to the two which I exhibit this evening, they also must doubtless have been plentiful in the middle ages in this country.

They are cylindrical boxes with covers, made of sheet lead $\frac{3}{16}$ in. thick—what we should now call 12 lb. lead—with their joints roughly soldered together. The larger is 6 in. high by $5\frac{3}{4}$ in. in diameter, and has on its cover a strip of lead soldered on to make a handle. The only marks on it are three vertical

The stones were then stripped of their timber, and the grass is already green around them. They have no appearance of repair, and are so natural that visitors frequently ask to be shown the stones that have been dealt with, as they cannot find them.

THE AUBREY HOLES

We are indebted to Bodley's Librarian for allowing us to examine the Plan of Stonehenge made by Aubrey in 1666 which forms part of the *Monumenta Britannica* preserved in the Bodleian Library. Aubrey mentions and marks upon his plan certain depressions, or cavities, at intervals within the circular earthwork. None of them was visible to us, but with a steel bar we searched for and found one, and subsequently more, all apparently at regular intervals round the earthwork. It occurred to us that there might be intermediate cavities, and excavation showed them to be at regular intervals of 16 ft., with the exception of two on the south-east side, which are a little closer together. To these we have given the name of 'Aubrey Holes' to distinguish them from others that may hereafter be found, and as a compliment to our respected pioneer who left such a useful record.

We have excavated a series of these holes from stone no. 80 (called the Slaughter Stone) round by the east to one on the south-west, where we stopped, deciding to gain experience before completing the circle. The holes so far excavated are twenty-three in number, but the series in the semicircle is not complete, as there is an intervening barrow on the south; so we left out four holes until we can give attention to the barrow. Unfortunately it has been opened before; and to distinguish the disturbed from the undisturbed portion it will have to be very leisurely and carefully worked, for it is very important, and may help us to arrive at the relative ages of barrow, bank, and holes, and settle the order of succession.

The holes vary very little in size and shape: the biggest is 3 ft. 5 in. deep, its maximum diameter 5 ft. 3 in., and the minimum 4 ft. 6 in. The smallest is 2 ft. deep, maximum diameter 2 ft. 6 in., and minimum 2 ft. 5 in. They are as a rule sharp and regular cuttings in the chalk, and are all more or less circular. Many have the edge of the chalk crater shorn away, or crushed down, on the side towards the standing stones of Stonehenge, this being apparently due either to the insertion or withdrawal of a stone, probably the latter. From their appearance and regularity there can be little doubt that they once held small

cuts on one side of the lid and body, showing the position in which the lid is to be put. The smaller capsula is $3\frac{3}{4}$ in. high by $2\frac{3}{8}$ in. in diameter and is quite plain. Both are in excellent preservation, except that their bases are decayed from damp. The larger capsula contained a plain round earthenware pot with a cover having a flat button handle on the top; it is of buff ware with a roughish surface and a slightly convex base, and is about half-filled with a mixture described by Sir Arthur Keith as charcoal, wood-dust, and sand, with a bit of stone and a few very small portions of human vertebrae. The smaller capsula has no inner vessel, but holds dust of a similar description without any recognizable pieces of bone. Sir Arthur Keith says that a microscopic examination might possibly prove the dust to be remains of human bone, mixed with remains of a coffin. Nothing that could have been part of a parchment slip, on which the name of the saint, the date of consecration, and the name of the bishop or bishops could have been written, has survived, if it ever existed.

One thing is immediately notable, namely, the amount of material in each relic-holder, particularly in the larger of the two. The earthenware vessel is at least half full. At the end of the fourteenth century, the date to which these altars may be assigned, the scarcity of genuine relics need not be insisted upon, but there is enough in these two deposits to serve for twenty altars. To propose an explanation would be an unprofitable speculation, and I shall not attempt it, but content myself with putting the facts on record. The inventory which I quoted earlier in this account takes no note of the dedication of the chapels, and the only evidence to be gained from it on this point arises from the mention of images. In the second chapel in the north aisle, from which the larger relic-holder comes, no image is mentioned, but in the fourth chapel, where the other was found, there were images of our Lady and of St. Mary Magdalen, suggesting a possible dedication for the altar here.

The earthenware pot, if its place of manufacture could be definitely determined, might provide a suggestion as to the provenance of the relics, but in this point also there is no ground for dogmatism.

DISCUSSION

Rev. H. F. WESTLAKE said the treatment of relics in England had never been thoroughly investigated. When relics were not available, it became the practice to enclose in altars *res sanctificatae*, objects that had been in contact with relics of the saints, and that final develop-

upright stones ; for, in two cases at least, a portion of the excavated chalk appears to have been returned, as if the hole had been too deeply dug to suit the intended height of the stone. This returned rubble was extremely hard and compacted, as if a very heavy weight had rested upon it for a long time. With the exception of four holes, all bore evidence of cremated human remains having been deposited in them, and at least three showed signs that actual cremation had been carried out in them.

Among the more interesting may be mentioned :

No. 21. Depth, 3 ft. 1 in. Maximum diameter, 5 ft. 5 in. Minimum diameter, 5 ft. 2 in. It contained 51 sarsen fragments,

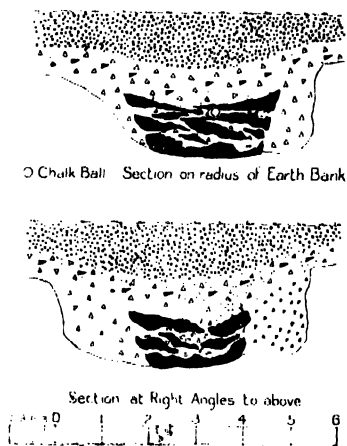


FIG. 6. Aubrey hole 21.

one being pitted, 61 fragments of foreign stone, 71 of hammer-stone sarsen, 1 piece of Bronze Age pottery, and 4 of Romano-British pottery. All these occurred about 20 in. below ground-level. After that a ball (hand-made) of chalk, 10 pieces of unburnt animal bone, and a bone pin in three pieces, burnt, at 2 ft. 3 in. A large cremation, amongst much wood ash dispersed in earthy rubble. This was first met with at 2 ft. below ground-level and continued to the bottom of the hole. Much of the rubble was burnt red. The hole had a sloping inner side (the side farthest from the rampart). At the top of this slope was a small bowl-shaped recess containing cremated bones. Presuming that the sloping side was crushed by the withdrawal of the stone, the cremated remains must have been deposited afterwards. The north-west side near the rampart was covered with finely crushed chalk rubble, hardened as if by great pressure (fig. 6).

ment of the practice had met with the condemnation of the Church. Speaking from memory he believed that in the Gregorian Sacramentary the collect for the consecration of an altar did not imply the enclosure of relics as did that in the Stowe Missal two centuries later. Dr. Wickham Legg had rather dogmatically asserted that the enclosure of relics was a local Roman custom, relying on a passage in a letter of St. Ambrose which certainly showed that an altar could be consecrated without such enclosure. A collect in the *Indutus Plancta*, a *Tract on the Mass* (1507), had a sentence in which the celebrant pleaded the merits of the saints whose relics lay beneath the altar, but a subsequent rubric directed that if there were no such relics the merits of all the saints should be pleaded instead. He inquired if in the older offices there were any trace of the blessing of the *capsula* itself which was still found in the *Rituale Romanum*. The Feast of Relics was celebrated on different days in the various religious houses in England, and at Salisbury its date had been often changed. The Exposition of the Relics which was made on the Feast was also made at other times when profit was likely to result. At Westminster such an exposition was made at the time of the annual fair on Tothill Fields and proved one of the most profitable sources of income to the sacrist's office.

The SECRETARY replied that there was no formula for blessing the *capsula* in the various rubrics: in fact there was no mention of it, nor any mention of the transfer of relics to the altar. Presumably there was some form of metal holder—a screw of lead or a complete vessel, as in the present instance, but the practice was not referred to in the Sarum use.

The PRESIDENT said it was always interesting to investigate the customs of monastic orders, and it was a practice hardly in accordance with modern thought to keep the whole class of lay brothers in an imperfect state of education. The leaden holders themselves were in admirable preservation, and furnished the means of estimating what value was set on their contents by the devout in the Middle Ages. But when it was necessary to display such relics, holders or shrines of greater intrinsic value were provided. A contrast in religious psychology was afforded by Buddhist worshippers at Buddha Gaya, who were not content to build an admirable shrine, but mixed in with the mortar a mass of sapphires that were never intended to see the light again. The little pottery jar was probably of local ware, and he noticed lack of care in the manufacture of the leaden receptacles. Mr. Peers had added to the interest of the relics by giving an illuminating account of the church to which they originally belonged.

No. 16. Depth, 3 ft. 3 in. Maximum diameter, 4 ft. Minimum diameter, 3 ft. 7 in. Contained 38 fragments of sarsen (one a fairly well-shaped hammer), 30 of foreign stone, 5 pieces of Romano-British pottery, a piece of foreign stone (small, rather flat, showing signs of use by rubbing), 3 rough flints, 6 flint flakes, and a flint fabricator at 34 in. below ground-level.

The hole contained a great deal of wood ash with cremated bones in it. This began at 19 in. below ground-level and continued to the bottom. The side of the hole had a layer of white chalk rubble in which was a fabricator, 5 in. from the bottom (fig. 7).

No. 13. Depth, 2 ft. 7 in. Maximum diameter, 3 ft. 7 in. Minimum diameter, 3 ft. 5 in. Contained 28 sarsen fragments, 34 of sarsen hammer-stone down to 25 in. below ground-level; below this 1 large animal bone at 28 in., a bone pin $6\frac{1}{2}$ in. long at 18 in., and a flint fabricator at 22 in.

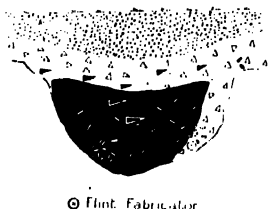


FIG. 7. Aubrey hole 16:
scale as fig. 6.

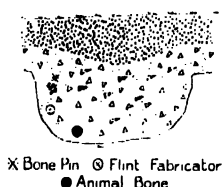


FIG. 8. Aubrey hole 13:
scale as fig. 6.

A few cremated bones were met with just below the humus at 10 in. Wood ash was met with at 24 in. on the inner side of the hole and continued in a slanting direction down and across to the other side. Amongst the wood ash were cremated bones. There was chalk rubble on the inner side *under* the burnt wood, and a certain amount, as usually found, on the side nearest the rampart (fig. 8).

No. 3. Depth, 2 ft. 6 in. Maximum diameter, 3 ft. 2 in. Minimum diameter, 3 ft. 4 in. In this some of the excavated chalk had been returned to the hole, presumably to raise the stone to the desired height. The same peculiarity was met with in two other instances. In this there was a thickness of 8 in. over the chalk rock much compressed. The hole had in it a cremation dispersed amongst the earthy rubble which filled it (fig. 9).

No. 5 hole had a similar layer, which was 5 in. thick. This hole also had a cremation over the hard mass, from 10 in. to 27 in. below the surface (fig. 10).

No. 19 was interesting because, after the upper soil was passed, we came upon a mass of white flint flakes at 32 in. discarded by

The Ancient Settlements at Harlyn Bay

BY O. G. S. CRAWFORD, B.A., F.S.A.

HARLYN BAY is situated about the middle of the north coast of Cornwall, near Trevoze Head, on the west of the estuary of the Camel, about four miles from Padstow. A number of discoveries of great archaeological importance have been made there and in the neighbouring bay of Constantine on the west; but so far no critical summary of the whole evidence in the light of recent knowledge has been attempted. The fullest account is that by the late Rev. R. Ashington Bullen (3rd edition, published at Harlyn Bay by Colonel Bellers in 1912¹). The site is one of considerable interest to the geologist as well as the archaeologist; and the scenery is very beautiful.

The discoveries will be described in the following order :

1. The cemetery and midden at Harlyn Bay.
2. The midden on Constantine Island and on the adjacent mainland.
3. The midden and medieval remains near Constantine Church.
4. The barrows on the cliffs between Harlyn Bay and Mother Ivey's Bay.

1. The Cemetery and Midden at Harlyn Bay

The cemetery was found in levelling the ground for building a house in 1900. The graves consisted of rectangular excavations in the ground, the sides being lined with upright slate slabs. They were covered with other slabs, sometimes inclined at an angle of 45° (but this is probably due to accidental slipping). The arrangement of the graves was fairly regular, and they were orientated to the present magnetic north. The bodies were buried in a crouched position, lying on the side with the knees bent up. No whole pots appear to have been buried with them, but bronze and iron pins were found in a number of cases. It is probable that many of the rings and pins were used together as a kind of brooch, to fasten the dress at the shoulder. The earliest possible date of the cemetery is fixed by the discovery in and around the graves of potsherds with incised geometric decoration, of the same Late Celtic type as occurs in the Glastonbury lake-village.

¹ References in this article are to this guide-book when not otherwise specified.

an implement maker who had been working on the spot and who must have demolished a large block of flint to make thin and delicate implements. That they all belonged to the same block was evident, not only from the colour and material, but because some of them fitted together; and they also clearly show the marks made when they were struck off (fig. 11).

Sarsen and other stone fragments were found in nearly all cases on the upper level, but rarely below 20 in., and they usually decreased in number downwards. It is a curious fact that in almost all the holes there was a little white chalk rubble on the bottom and against the side nearest the rampart. The reason may possibly be that the stone was dragged out on the opposite side, leaving this deposit undisturbed. It might perhaps be connected with the making of the rampart, but these questions we hope the excavation of the barrow may solve.

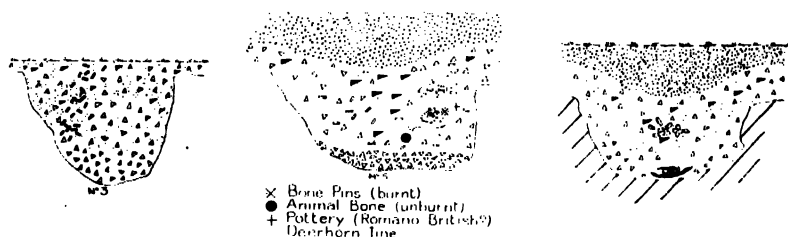


FIG. 9. Aubrey hole 3 :
scale as fig. 6.

FIG. 10. Aubrey hole 5 :
scale as fig. 6.

FIG. 11. Aubrey hole 19 :
scale as fig. 6.

DITCH AND RAMPART

We made a small investigation of the ditch and rampart, by cutting a trench 3 ft. wide from one of the Aubrey holes through the rampart till we met the edge of the ditch. We found the vallum to be a very low one of chalk and rubble, only 2 ft. 6 in. high from its crest to the chalk rock. Just under the humus were three sarsen chips, ten of foreign stone, and two small pieces of Romano-British pottery. These were all that were found.

We continued the trench 9 ft. farther to the opposite side of the ditch, meeting the solid chalk beyond. We excavated this part of the ditch and found it 39 in. deep, measured from the centre of the ditch to ground-level. At 12 in. from the top we found five sarsen chips, thirty-two of foreign stone, three rough flints, one flint flake, a small piece of Bronze Age pottery, and two of Romano-British, also a strap ornament of bronze and a bronze bead, also of the Roman period.

Unfortunately no record seems to have been kept—or at any rate published—of the exact contents of each grave or of the circumstances in which the potsherds were found.

The nearest parallel to these cist-graves is that discovered about the same time at Sheepwash, near Freshwater in the Isle of Wight.¹ The date of this slightly larger and more massive cist was fixed by the discovery in it of a two-handled vessel of Late Celtic type. Burials of any kind belonging to this period are very rare in the south and south-west of England.

The age of the cemetery is also indicated by the presence in some of the graves of ring-headed pins of bronze and iron. One, of bronze, was found 28th September 1909, and is of the swan-neck type. A bronze ring was also found. A similar pin, but with a shorter shaft, was found in the Taunton hoard,² with socketed celts, sickles, a tanged razor, and other objects of the Late Bronze Age. The presence here of similar pins in bronze and iron shows that the cemetery cannot be earlier than the transitional period between the Bronze and Iron Ages.

But it is probable that in Cornwall, as in the similar region of Brittany, the firmly-rooted Bronze Age culture lasted on much longer than elsewhere. The use of bronze implements probably continued in both regions far into the Hallstatt and La Tène periods, and possibly in Cornwall down to Roman times.³ That was the natural result of the presence of copper and tin ores in both. Déchelette drew attention to the almost complete absence of pre-historic iron objects in Brittany and the Cotentin, and contrasted it with the great abundance of bronze implements found (see his maps). The cemetery at Harlyn Bay certainly belongs to the date 400–150 B.C., and probably falls within the latter portion of this period.

A similar date is suggested by two bronze brooches from Harlyn Bay, described in *Proc. Soc. Ant.*, xxi, 372–4 and fig. on p. 373. 'The brooches are not of British type. Their nearest analogues are found in the Iberian peninsula . . . and may be referred to a time when the Hallstatt models were being circulated over Europe and being modified locally. The cross-bow type is actually found at Hallstatt (*Brit. Mus. Iron Age Guide*, fig. 28, no. 5). The interments in which these brooches were found date probably from the third century B.C.' In passing, the evidence of trade-route relations with Spain may be noted; it will be referred to again later in this paper.

¹ *Proc. Soc. Ant.*, xxv, 189–92.

² Evans, *Bronze*, p. 367, fig. 451.

³ See Borlase, *Antiquities of Cornwall*, p. 263.

In the next layer down to 22 in. were two sarsen chips, six of foreign stone, seven of bone, three pieces of Romano-British pottery, one flint flake, and a Lee-Enfield rifle cartridge case at 18 in. below ground-level. The next layer down to 30 in. contained five flint flakes and part of a jawbone of a deer.

The lowest layer yielded 14 roughly worked flints, 26 flint flakes, and a fragment of deer antler.

Subsequently we carried the excavation of the ditch farther west in an area 9 ft. by 12 ft. Here we found that the depth of the ditch which had been previously 39 in. increased on the west to 54 in., and probably future excavation may show its course to be similarly irregular. We found no object of interest beyond a cremation in a bowl-shaped cavity in the solid chalk at the bottom on the side below the vallum. Stone chips were present in the upper layers, but disappeared below 25 in., and there were a few rough flints and a deer bone at the lowest level. The edges of the ditch are perpendicular from the humus through hard chalk to about 24 in. down, where the chalk takes a curve to the bottom, which is roughly flat. From this it rises again in a corresponding curve and meets a corresponding perpendicular chalk bank, from the top of which the vallum begins (fig. 12).

Aubrey's plan does not show the Slaughter Stone lying in its present position, but shows two large upright stones inside the vallum and one outside. These no longer exist, and we have not yet been able to discover their sites as indicated by him. We have only lately been examining this spot, so perhaps a later search may reveal them.

In dealing with the Slaughter Stone we already knew that Cunnington had examined it in 1801, so we thought it best to remove his spoil from around it to get further information. We found a cavity for about 3 ft. or 4 ft. around the stone, evidently his work, but one could see that the stone had been buried earlier in a pit very roughly dug in the solid chalk and just deep enough to allow the soil to cover it at ground-level. Perhaps the intention had been to bury it deeper, but the hole was not made long enough, consequently the top and bottom rest on sloping chalk and cause a void of about 10 in. under it. This void was filled with dirty rubble containing much modern rubbish, evidently returned by Cunnington. There could be little doubt about this, as we found a bottle of port wine left under the stone, presumably by him out of consideration for future excavators. The seal was intact, but the cork had decayed and let out nearly all of the contents.

I should have mentioned that those who dug the pit cut into

Though the evidence points definitely to the Iron Age, further and more systematic excavation is desirable to settle this point. About 130 graves are said to have been discovered, and the site is probably by no means exhausted. There are indications of other cemeteries on the north coast of Cornwall which are still practically untouched.

The cephalic index of eleven of the skulls measured by Dr. Haddon

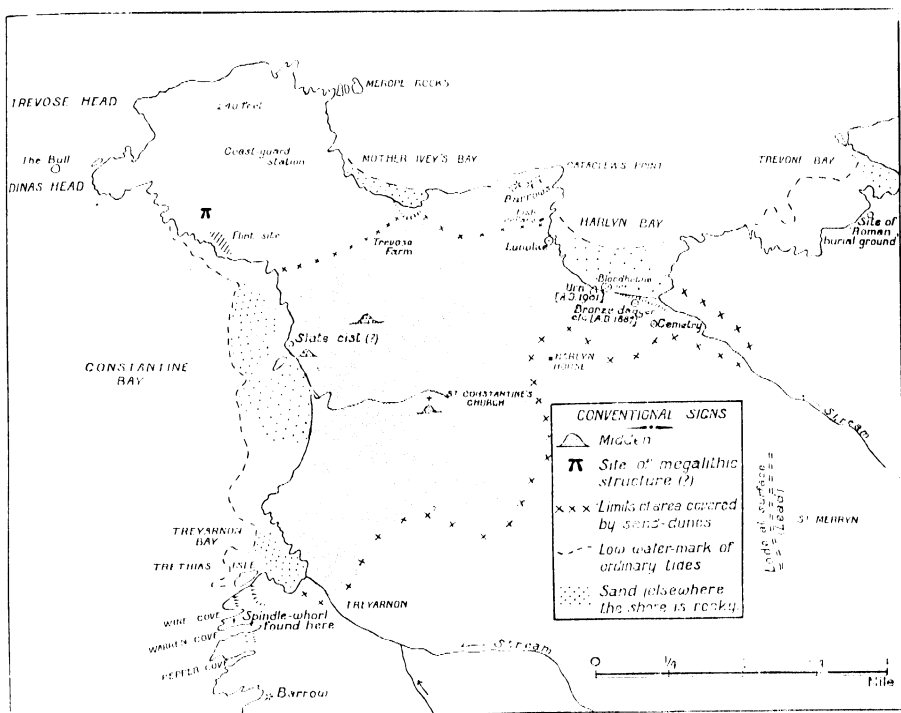


FIG. 1. Map of Harlyn Bay and neighbourhood.

ranges from 70 to 82.22, five of these are dolichocephalic, five mesocephalic, and one brachycephalic. That of four others lies between 72.9 and 76.7.¹

Dr. Beddoe concluded that the average stature of the men was 5 ft. 4.5 in., and of the women 5 ft. 1.5 in. Mr. R. W. Hooley points out that this average stature agrees with that of the Romano-British skeletons found by Pitt-Rivers at Woodyates.

The graves appear to have been dug from an ancient land-surface, now buried under blown sand to a depth of 12 ft., and

¹ Dr. Haddon also examined two skulls from Constantine Church and one from 'Constantine', presumably the island or adjacent midden on the mainland.

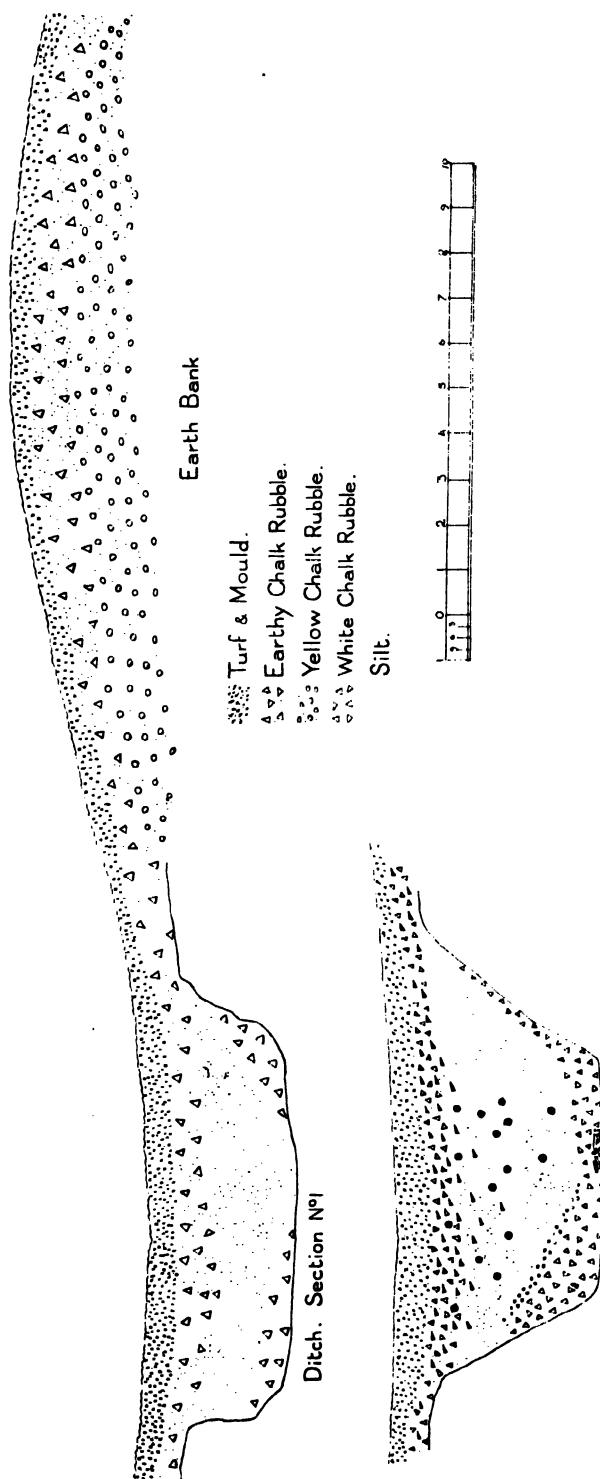


FIG. 12. Sections through Rampart and Ditch: No. 1 east end, No. 2 west end of ditch.

apparently the remnant of a 'raised beach', for it is described in the diagram on p. 48 of the guide-book as consisting of 'dark sand' (in contrast with the bright yellow sand of subaerial origin). The raised beach at Constantine Bay has the same appearance, and probably underlies the recent blown sand everywhere across the isthmus.

It is difficult to decide anything about the midden near the cemetery owing to the absence of any plans or accurately measured sections in the report. It appears certain, however, that the blown sand had not overwhelmed the site when the cemetery was formed.

2. *Constantine Island and the midden on the mainland opposite*

Constantine Island lies at the northern end of Constantine Bay, and is separated from the mainland at high tide by a few yards only of shallow water. The whole island lies between high and low watermark, and at low tide the western or seaward end is left some distance away from the sea. It is about 40 yards long by 15 or 20 wide; and consists of steeply-inclined slaty rocks covered by a few feet of sea-sand, the remains of a raised beach. The surface of the island is covered with close turf. At the north-west end of the island there formerly stood a rude structure built of slate slabs, but no traces of it now survive. It appears to have been destroyed in the winter of 1901-2, and the site has now been denuded by the action of the weather. It was about 13 ft. long by 3 ft. wide, and roughly ellipsoidal in shape. On one side near the wall were said to be the remains of a hearth. Inside the hut were found bones of the ox, sheep, pig, rabbit, and horse; also limpet shells, 'a hand hammer made from a raised-beach pebble of hard Cataclews stone (vogesite)', and several lumps of clay.¹ In the sides of the cliff, where the raised beach has been eroded by wind and rain, are large quantities of flint flakes; but it would be rash to say that they were contemporary with the formation of the raised beach. When I visited the island on 7th July 1917, I found a hammer-stone, apparently like that described above, also made from a natural beach-pebble of a hard igneous rock (fig. 2).² As shown in the illustration the end is worn concave, evidently by hammering on a convex surface such as a large boulder. I suspect that mussel and limpet shells were pounded for mixing with the clay of which pots were made. If so, the

¹ *Harlyn Bay*, pp. 52, 83, 84.

² See *Proc. Soc. Ant.*, xxxii, 93.

an Aubrey hole on the west close to the stone, but fortunately three parts escaped and it is still well defined. It was full of Cunnington's spoil, so he certainly emptied it, and might have been responsible for the damaged side.

Measurements having been taken, we examined the bank west of the stone, but found hardly any of Cunnington's débris upon it. It was composed of loose rubble, and we were surprised to find it descending well below ground-level: the result being that we came upon a very large hole roughly 10 ft. in diameter by 6½ ft. deep which we gradually excavated. We found a coin of Claudius Gothicus in the upper layer, but nothing interesting until we reached the bottom, where two deer-horn picks were resting against the curved side (fig. 13).

There was a large slab of stone standing on end near the middle, resting on the bottom. The material was very soft sarsen which crumbled if pinched between thumb and finger. There can be no doubt that a large stone once stood in the hole, but when it was taken out, and why, cannot be stated. The impressions of irregularities on the stone's base are very noticeable, both on the sides of the hole and upon some firmly compacted rubble on the bottom, which have rather a resemblance to an impression of the base of the Slaughter Stone, but I cannot state definitely if this is so, and the movement of taking the stone out must have distorted some of the impressions. The slab at the bottom appears to be too perishable for a standing stone and may be a piece flaked off a packing block. This is as far as our operations have taken us up to the present time.

I should like to say something about the foreign stones. Possibly they once stood in the Aubrey holes, for if the number of the holes proves to be what we expect there would have been just about sufficient of them to make the inner circle and horse-shoe. The Aubrey circle was presumably earlier than Stonehenge, perhaps of the Avebury period, and would have been of undressed stones which were dressed on removal to their present position.

This of course does not bring us any nearer their place of origin, but Mr. Tapp has very kindly undertaken to enlist the services of the Geological Survey on this point.

In conclusion I should like to express my thanks to my friend and colleague Mr. R. S. Newall for the great help he has given throughout the work. He has made all the drawings, and the excavation of the Aubrey holes was all his labour. Also I should like to record my thanks to all the members of the Office of Works staff for their constant and courteous assistance.

name of 'potter's hut', given for no sufficient reason by the finders, has in reality some justification. A 'piece of slate with a bevelled edge'¹ was also found in this hut and regarded, probably rightly, as a potter's tool. There are the usual abundant remains of mussels and limpets everywhere on the island, also a few specimens of *Purpura lapillus*.

In the museum at Harlyn are the remains of an iron dagger and a bronze object, both said to be from Constantine Island. It is highly probable that they belonged together; the latter is crescent-shaped, with three rivet-holes. Both belong in type to the period of La Tène. In the same museum are potsherds of characteristic Glastonbury ware, with incised ornament, found on the island. There is also a lump of some vitreous substance from the same site.

On the mainland close by, the remains of the same raised beach are visible in the sides of the 'cliff', covered with sand-dunes of recent origin. The blown sand appears, however, to be of more ancient date here than at Harlyn, for I noticed that the limpet shells continued to occur in it right up to the top. Some of them lay one inside the other, and must have been so placed by former occupants of the site. At the foot of the best section exposed I found a sherd of rough pottery, in pieces; it appeared to rest upon the top of the raised beach surface, but it might quite well have fallen from a higher level. It is part of the rim of a small bowl and does not appear to have been wheel-turned. It is stated² that coarse, hand-made pottery occurs at the lower levels of this midden and wheel-turned pottery in the upper; but more careful excavation is needed. Moreover, the potsherds in question are nowhere available for inspection.

It is clear that the remains found on Constantine Island and the mainland opposite are in part contemporary, though it is possible that the lower levels may contain relics of a still earlier period. Up to the present no satisfactory evidence has been brought forward to show that either the Harlyn Bay midden or any other settlement in this district is older than the period of La Tène.

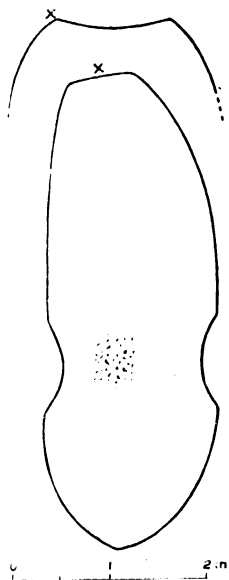


FIG. 2.

¹ *Harlyn Bay*, p. 21, fig. 2.

² *Ibid.* p. 84.

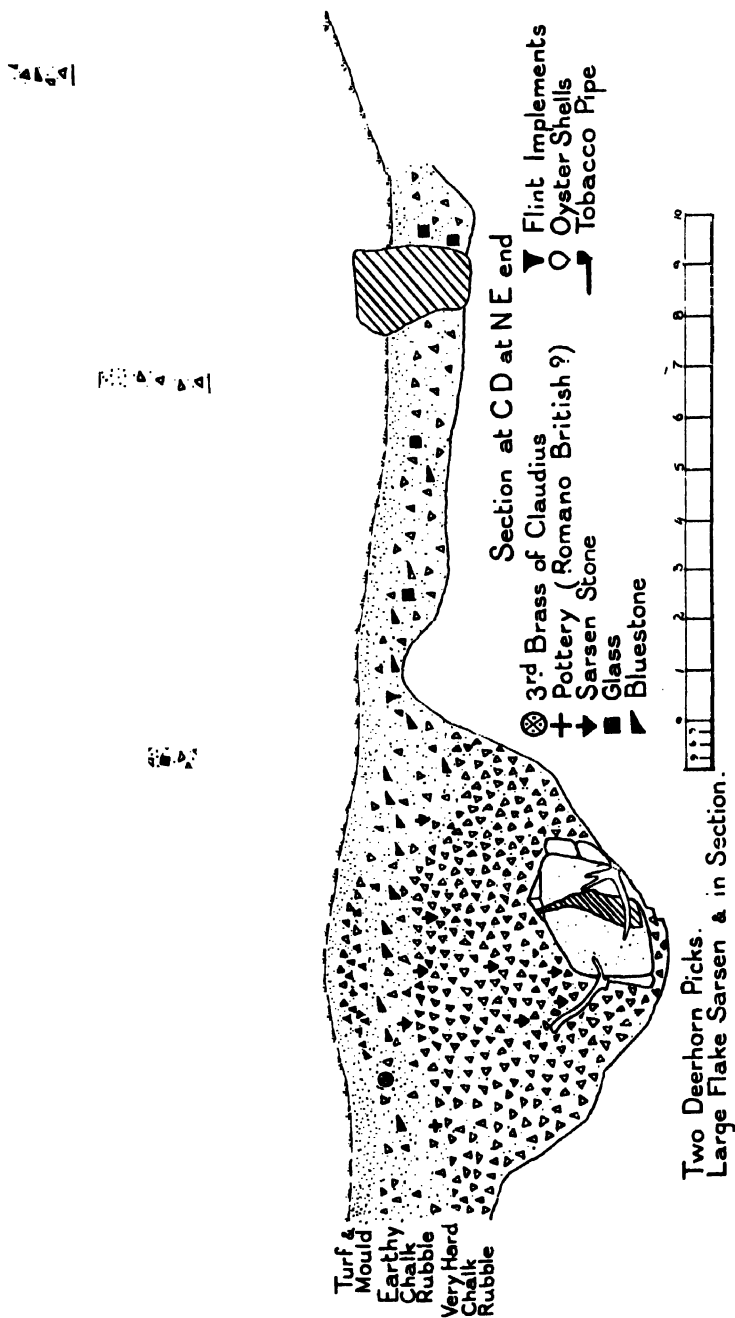


FIG. 13. Sections through Slaughter Stone : Lower section shows large hole which may have once contained the Slaughter Ston

3. *Constantine's Church*

A short distance inland from Constantine Island are the ruins of an ancient chapel dedicated to Constantine. The chapel lies in a small artificial hollow amongst the sand-dunes, close to the banks of a small rivulet where is a sacred well or spring with stone seats round it. It is built of flat slate slabs without mortar. Under its western end are two partially buried boulders of Catclews stone. They are doubtless the sacred nucleus round which the chapel was built, and must have been regarded with superstitious awe by the inhabitants. The Christian priests, being unable to stop these furtive rites, made them orthodox by changing the name and building a chapel. In the sand on the south side I found a number of typical medieval potsherds, some glazed and decorated with painted designs, others of rougher make and gritty. Both kinds are, however, certainly medieval in date, and there is no need to conclude that they belong to three periods, 'medieval, Roman, and neolithic'.¹ A 'human skull, animal bones, and pottery' were found here by Mr. Spence Bate in the middle of the nineteenth century.² Some skulls, 'probably of the Christian era',³ were found here and described by Dr. Haddon. Their cephalic indices were 80.4 and 81.2.

Though the stones in the chapel suggest a prehistoric settlement, no remains undoubtedly earlier than medieval have been found here. But they may exist, and I think that the old land-surface under the sand-dunes was once continuous between Harlyn Bay and Constantine Bay. Prehistoric remains may therefore be expected.

4. *The barrows on the cliffs above Harlyn Bay*

A. Bloodhound Cove (1901).—In December 1901, a fall of the cliff above Bloodhound Cove revealed the existence of an urn. It was removed on 1st January 1902 by Mr. Hellyar and his sons with Mr. Mallet. The exact spot is a small promontory immediately below the 'B' in 'Bloodhound' (Ordnance Survey, 6 in. map, Cornwall, Sheets XVIII SE. and XVIII SW.). It is now quite bare of soil, but can be identified by means of the photograph reproduced as plate 19 of *Harlyn Bay*. The urn (*ibid.* plate 18, figs. 1 and 3) was inverted over burnt bones, and is reproduced here as fig. 3. On p. 99 of the handbook it is said that amongst the burnt bones were 'a bronze pin 1.5 in. long and two fragments of

¹ *Harlyn Bay*, p. 107.

² *Report of the British Association*, 1864, p. 88.

³ *Harlyn Bay*, pp. 72-108.

Appendix : Note on the method adopted for setting leaning stones upright
By C. R. PEERS, M.A., Secretary

The problem to be faced in securing the leaning stone numbered 7 on the plan was as follows. The stones of the outer circle, as first set up, were retained, approximately, in their relative places by the ring of lintels which they carried; but when this ring was broken the pressure of soil round the feet of the stones was the only obstacle to deflexion, whether inward, outward, or sideways. When it is remembered that the average depth of the feet of the stones below ground surface is only 4 ft. 6 in., while the height above ground is 15 ft., and when the tapering shape of the feet is also taken into account, it will be seen that the probability of some movement is great. In judging, therefore, of the original position of a stone, its present position can give no absolute guide, and an adjustment which brings the centre of gravity as nearly as possible to the line of the vertical axis, and at the same time satisfies the fitting of the mortises on the lintels to the tenons on the uprights, where these exist, must be considered the best that can be obtained. Such an adjustment can of course only be made on a system by which the smallest movements of the stone can be controlled, and the method now to be described was devised with that intention.

A timber framing of 8 in. by 8 in. pitch-pine baulks, vertical and horizontal, was placed round the stone, the horizontal timbers claspings the vertical timbers, and held together by long 1 in. steel bolts. For fitting to the irregular faces of the stone small pieces of wood, secured by folding wedges, were used, and felt was packed between the stone and the timber to prevent injury to the surface of the stone.

To the lower part of this framing were secured two steel joists, 14 in. by 6 in. by 20 ft. long, one on either side, and placed as nearly as possible at right angles to the axis of the stone. From the ends of the joists raking timbers, fixed to angle cleats, ran at an angle of about 45° to the top of the framing, in order to act as struts, and to convey the movement of the joists to the tops of the stones.

Under the ends of the joists were set travelling screw-jacks of 10-tons capacity, bedded on steel plates laid on the solid chalk. By raising or lowering any or all of these four jacks the angle of the upright stone could be altered in any direction, making minute adjustment possible, but for extra security, in case of any unforeseen slip, wire ropes were attached to the top of the framing to act as guys in different directions, and other ropes, secured to

other pins'. These have disappeared, but four fragments of the urn survive, and were in the possession of Mr. Hellyar of Harlyn House in 1917, where I inspected and made drawings of them. It is of coarse, heavy, and gritty ware, and two fragments have broad handles attached, with horizontal openings 0.8 in. in diameter ; the handles are 3 in. (fig. 3 (a)) and 2.1 in. wide, and the

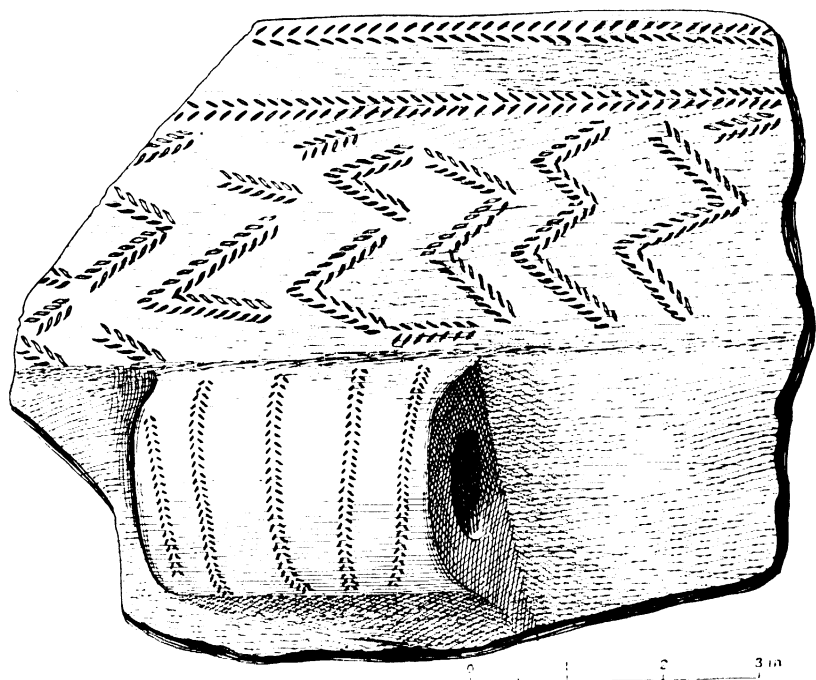
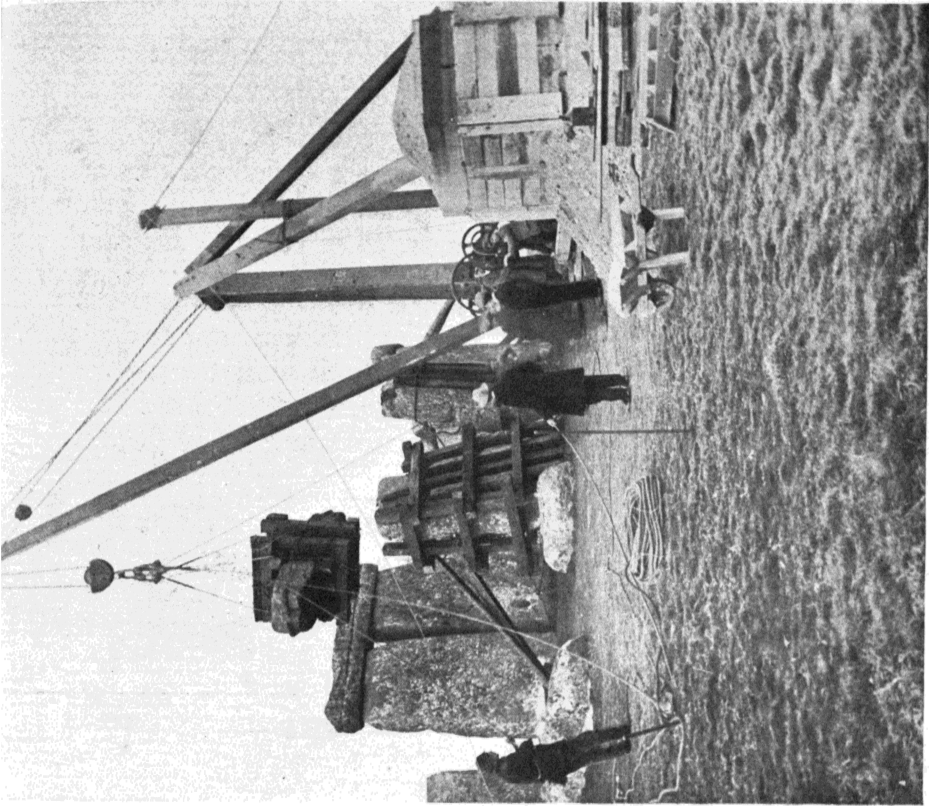


FIG. 3 (a).

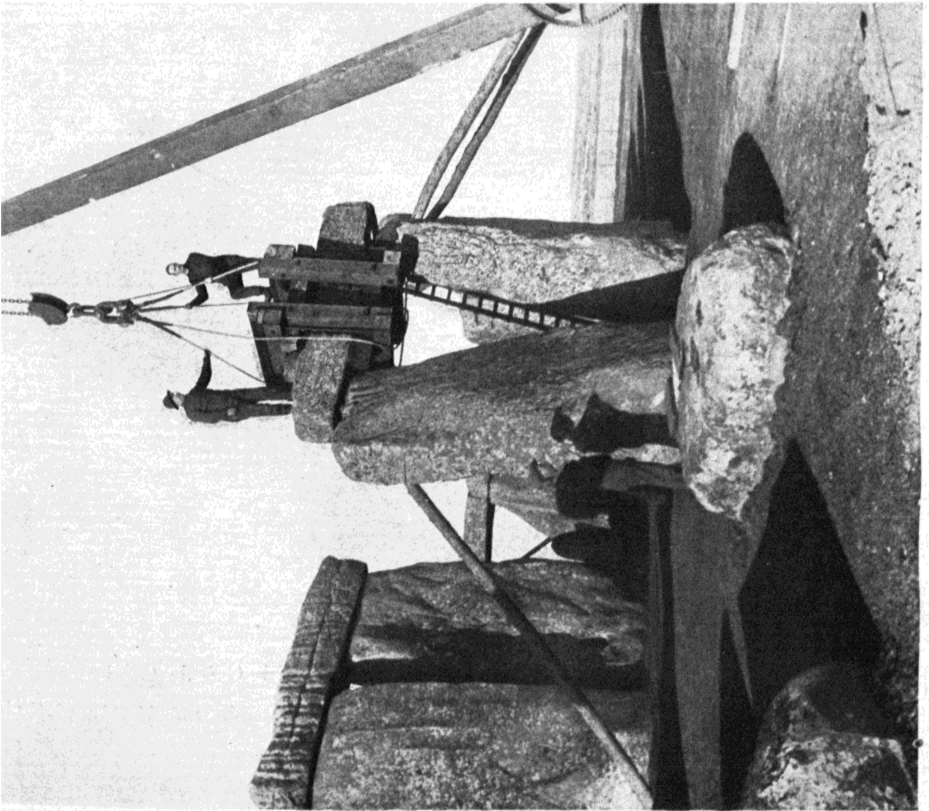
upper part of the rim is ornamented with two bands of chevrons, beneath which is an irregular double row of much larger chevrons of impressed cord-pattern. The lip is widely splayed, the inside being ornamented with a double row of chevrons. The width of the lip is 0.9 in., and the average thickness of the sides 0.5 in. The dimensions of the whole urn are given as follows¹ : maximum diameter, 16 in. ; minimum diameter, 14 in. ; depth, 9 in. ; thickness of material, 0.5 in.

I did not, however, see any signs of the bottom at Harlyn House, and I am quite sure that the urn must originally have been much higher than is stated. The drawing of it in the handbook (plate 18, fig. 3, copied from a sketch by the the Rev. W.

¹ *Harlyn Bay*, p. 99.



LINTEL BEING LOWERED



LINTEL READY FOR LIFTING

Jago) is inaccurate and impossible. The interior surface of the urn is blackened by fire.

B. East of Bloodhound Cove (1887).—Another urn, also at Harlyn House, was discovered in 1887 about 250 yards east of the former. It is shown in fig. 4 (section only). This is the one of which a drawing appears in the handbook on plate 18, fig. 2.¹ It stood 'mouth upward, covered by a wide, flat stone. . . . The heavy mounds of sand above were seen to contain some stonework'. There are now only two fragments surviving, one of which has a handle, 4.5 in. wide, with perforation 1.1 in. in diameter. The general scheme of ornament is not unlike that on the first urn, but instead of the double row of large chevrons is a row of triangles with rows of punctured dots parallel with one of the sides. The rim bends outwards at a point 1.6 in. below the lip: the inside of this projecting portion is ornamented with a double band of small impressed chevrons, and the outside with four rows. A similar double row of chevrons occurs at the widest part of the urn, immediately below the triangles. The dimensions given are as follows: Height, 20.25 in.; diameter at mouth 15 in. and at base 6.75 in.

With the urn were found an 'incense-cup', a bronze dagger, a bronze pin, a slate knife-sharpener, and possibly a perforated stone bead or spindle-whorl.

The 'incense-cup' (fig. 5) is perfect, with a height of 1.4 in.; diameter at top 2.6 in. and at bottom (external) 1.75 in. It is made of yellowish clay, free from grit, and has, at 0.4 in. below the lip, two holes side by side, 0.2 in. in diameter. It is ornamented round the upper part by three girth-bands of cord ornament, beneath which is a single row of similarly made chevrons. The upper part of the lip is splayed inwards, and is ornamented (A-B) with three parallel rows of cord ornament.

The bronze dagger (fig. 6) is 4.2 in. long and 0.2 in. thick at the midrib. There are two rivets attached to it. The point was found with it but has since been broken off and lost. Mr. Hellyar told me that it was found resting across the top of the incense-cup.

The perforated greenish-yellow stone (fig. 7) is almost certainly a spindle-whorl. It is, however, by no means certain that it was found *in association with* the other remains, as the handbook says (p. 96).²

¹ A fuller account is given in the *Journ. Royal Inst. Cornwall*, vol. x, 1890-1, pp. 199-207 (pls. 4 and 5).

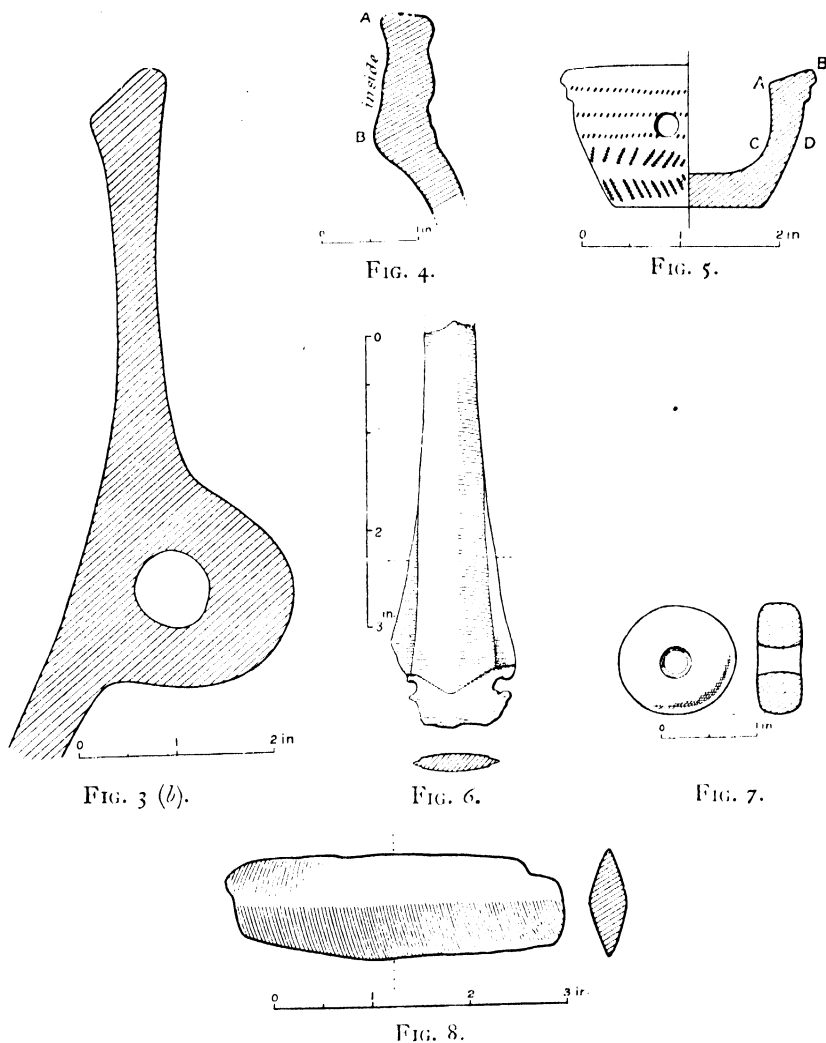
² The *Journal* distinctly says that the spindle-whorl was 'picked up at the same place subsequently'.



STRAIGHTENING STONE No. 6 BY MEANS OF JACKS

Photos. H.M. Office of Works.

The bronze pin is 1.7 in. long and is much corroded. It must be distinguished from those, now apparently lost, which were found in the first urn at Bloodhound Cove, one of which was only 1.5 in. long. This specimen, with all the other objects



from the interment now being described, is in the possession of Mr. Hellyar of Harlyn House.

The slate sharpener (fig. 8) is much rubbed but does not appear to have been shaped. It is 3.5 in. long and 1.2 in. wide.

C. Food-vessel and perforated stone axe-hammer.—Mr. Hellyar also has in his possession a broken vessel of thin brownish, gritty

the lower timbers of the framing, were passed under the foot of the stone. The straightening operation began by raising the joist ends $\frac{1}{2}$ in. on the side toward which the stone leaned, and lowering $\frac{1}{2}$ in. on the other side; this was continued in 1 in. movements till the stone was upright, careful inspections being made between each movement to see that lashings, packings, etc., were not displaced.

The total southward movement at the head of the stone was 2 ft. 6 in., which was accomplished by raising the jacks at the north ends of the joists $14\frac{1}{4}$ in. and $14\frac{3}{4}$ in., and lowering those at the south ends $14\frac{1}{2}$ in. and $10\frac{3}{4}$ in. respectively.

No movement or inclination to slip was observed during the raising of the stone.

DISCUSSION

Dr. H. H. THOMAS, Petrographer to H.M. Geological Survey, said that he was well acquainted with small specimens and sections of the Stonehenge foreign stones, and, through the kindness of Colonel Hawley and Mr. Tapp, he had now had ample opportunity of studying the stones themselves. He had not altogether been unprepared to find that, with a few exceptions, all the 'bluestones' were linked together by a common character, that made it practically certain that they had all been derived from the same area, and possibly from the same rock-mass. The bluestones are mainly diabases that are remarkable for the presence of white or pinkish irregularly bounded feldspathic spots that vary from the diameter of a pea to twice or three times that dimension. The speaker pointed out that the occurrence of such feldspathic spots was highly characteristic of, and as far as he was aware confined to, the diabase sills of the Prescelly Mountains of Pembrokeshire. Many such general localities as Devon, Cornwall, Wales, and Cumberland had been suggested by previous writers as producing similar rocks, but now he was glad to be able for the first time to point to a locality where there existed a rock absolutely identical with that of which the majority of the bluestones was composed; and it occurred both *in situ* and as boulders comparable in size to the Stonehenge monoliths.

Another highly characteristic rock of which there were two stones at Stonehenge, and of which an abundance of chips had been unearthed in recent excavations, was a beautifully banded spherulitic rhyolite. There should be no difficulty in identifying its source, and the speaker hoped shortly to be able to do so.

With regard to the majority of the bluestones, he felt certain that their ultimate source lay in the Prescelly Mountains and in the boulder-strewn area to the immediate south-east. All possible proximate sources, however, must of course be investigated, but he felt that the idea of Pembrokeshire boulders being carefully selected from practically all other rocks, and stranded on the high ground of Salisbury Plain by glacial action, was contrary to all sound geological

clay (fig. 9), found in a barrow with a perforated stone axe-hammer (fig. 10).

The pot is ornamented round the shoulder with rows of grain-shaped grooves in groups of three. They are not formed by finger-tip impressions, but have evidently been stamped. The vessel is 6.2 in. in diameter at the top and 3.4 in. at the base.

The axe-hammer (fig. 10) is made of yellowish grit and is 3.8 in. in length. The width of the cutting-edge is 1.7 in. and the diameter of the perforation 0.5 in. The material may be red

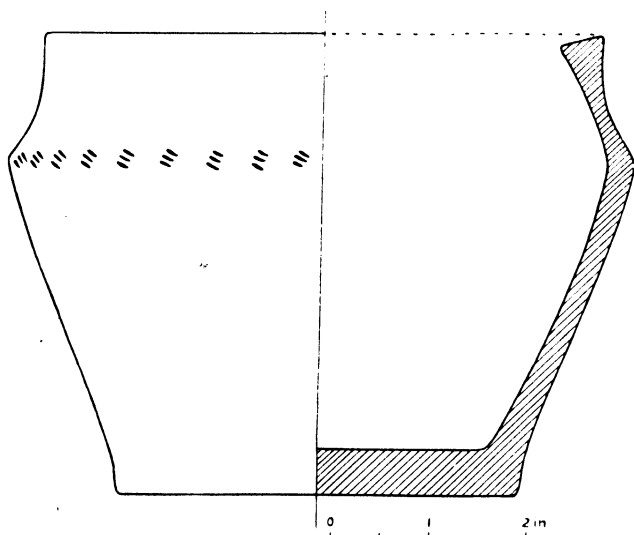


FIG. 9.

elvan from the raised beach. It is of the Fredsgård type.¹ A similar axe was found in a barrow at Jack Straw's Castle in Wiltshire, associated with a bronze knife-dagger.²

The site of this discovery is not known, but it was somewhere on Mr. Hellyar's land, probably near Trevoise Head.

Mr. R. W. Hooley, F.G.S., who has most kindly read through this paper in MS. and who knows Harlyn Bay, writes :

'I determined the perforated axe-hammer to be made of an igneous rock, apparently identical with the intrusive dyke which forms the point near the "Round Hole" of Trevoise Bay. I understood from Mr. Hellyar that this specimen was found in the barrow opened by visitors (with his permission) on the cliff

¹ R. A. Smith, *Proc. Preh. Soc. E.-Anglia*, vol. ii, pp. 497, 498 (fig. 111 b).

² See Colt Hoare, *Anct. Wills*, vol. i, pp. 39, 40.

reasoning; and that such an assemblage of stones, of which so many were of the same type, pointed to human selection and conveyance from a distance.

He wished to point out that foreign boulders of large dimensions were not of infrequent occurrence in the low coastal region between Selsey Bill and the Isle of Purbeck, but, as far as they had been examined by the speaker, they had all proved to belong to types unrepresented among the stones of Stonehenge. He intended, however, further to investigate these boulders left presumably by floating ice, with the object of determining whether any were like those erected at Stonehenge. If it should be proved ultimately that Stonehenge types were represented, then the south coastal region would constitute a possible proximate source, but failing that there seemed to him no alternative but to go to the ultimate Pembrokeshire source for the material in question.

His investigations were as yet only in their initial stages, and he expressed the hope that he might be able to throw still more light on the sources of the foreign stones that had always been the subject of so much speculation.

Mr. DALE quoted Professor Judd's opinion of 1901 that the bluestones were glacial boulders left on Salisbury Plain; and on one of the fragments exhibited he detected striae. Much had been collected for building purposes, and human transport from Wales would be a difficult matter.

Rev. G. H. ENGLEHEART said the expert opinions left the meeting in a dilemma. The bluestones were declared not to be glacial, and even if they had been brought from Wales, it was difficult to believe that they were dressed only on arrival at Stonehenge. Transport of such an unnecessary weight argued lack of intelligence. In any case they were boulders and not quarried stones: one piece was striated, and he thought they were all of glacial origin.

Sir ARTHUR EVANS congratulated Colonel Hawley and the Inspector of Ancient Monuments on the first season's work. The discovery of the holes indicated on Aubrey's plan was a distinct advance; and he was ready to believe that a circle of small stones once existed inside the earth ring and had been subsequently removed, perhaps to the centre of the monument. The cremations would by general consent be placed in the later Bronze Age, and he was confirmed in the belief that the later history of Stonehenge was connected with the cult of the dead, its earlier elements being late neolithic. Recent discoveries tended to show that construction and reconstruction continued over a long period, and perhaps extended into the age of metal. Professor Petrie's metrological studies had shown that the outer circle was carefully drawn but did not have the same centre as the bluestones; and three periods of construction had been deduced.

Professor FLINDERS PETRIE argued that the difference of centres indicated laying out at different times; and transport from Wales would imply unified government or tribal warfare. The latter seemed

above the Cataclews quarry', i. e. the same barrow as supplied the Cataclews cinerary urn described below.

D. Cataclews cinerary urn.—A barrow on Cataclews cliff was excavated by a member of the Zoological Society of London, and a fine cinerary urn found (fig. 11). The sides are thinner and the paste is smoother than usual. It is of a light yellow colour,

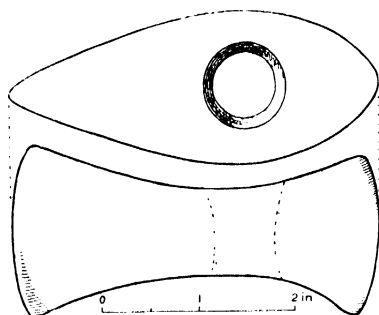


FIG. 10.

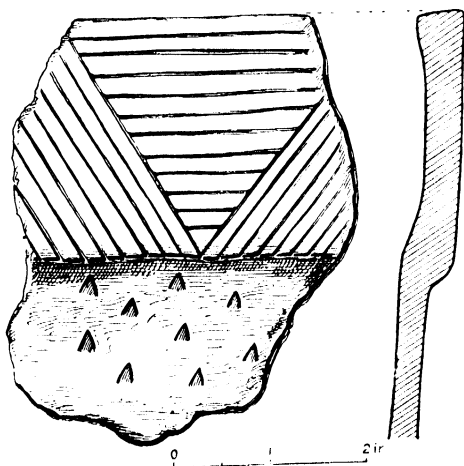


FIG. 11.

and the rim, which overhangs slightly, is decorated with triangles filled with parallel lines of cord-ornament, the impressions being unusually shallow. Below are a number of deep wedge-shaped marks. It has two handles, whose horizontal width is 2.2 in. The upper side of the lip is also decorated with impressions. Its diameter is about 12 in. across the top. No details of its discovery are known, and an attempt to mend it was unsuccessful.

more probable, and the stones were perhaps a form of war indemnity. He hoped that special measures would be taken to secure everything found in excavating the Aubrey holes.

Mr. REGINALD SMITH drew attention to the absence of cinerary urns, and argued that the cremated bones must have been deposited in the Aubrey holes immediately after the stones were taken out; otherwise the sides would have crumbled and the cavities been silted up. Cremation was characteristic of the later Bronze Age, though not unknown in Yorkshire long barrows; and there was nothing to date the deposits, which might represent human sacrifices on some solemn occasion. The patinated flints looked earlier than the monument, and differed from the pounders used for dressing the megaliths. In a few inches of soil, which had been disturbed more than once, finds of all periods might be expected, but it was curious that Roman pottery was common at various levels. The work had, however, only just begun, and it was inadvisable to draw conclusions from such scanty evidence.

The PRESIDENT felt that the discussion would bear fruit in the next report, and took much interest in the novelties already discovered, though any deductions from them would be premature. How the bluestones reached the site was likely to remain an unsolved problem, but thanks were due to Mr. Tapp for securing an official account of their nature and origin. Dr. Thomas's report was an important addition to the controversy. Colonel Hawley seemed to forget his years at Stonehenge; and in thanking him for his report the Society would wish him and his colleagues all success in the coming season.

5. *The two gold crescents and flat bronze axe*

The special object of my second visit to Harlyn Bay on 17th July 1917 was to obtain if possible first-hand information on two points. (1) The exact site where the gold crescents were discovered, and (2) the evidence for the association of the crescents with the flat bronze axe. Mr. Hellyar distinctly remembers the discovery in 1865. His father had made a pond close to the boat-house now standing just south of the house called Cataclews Fish-cellars. The pond was damaged by the sea and had to be re-made; it was then that the crescents were found. A workman came into the farm one day wearing the gold crescents round his calves, thinking they were brass! The 'other things' found at the same time were thrown over the cliff as being worthless. These are vaguely described as 'battle-axes', but the description is hardly worth much as evidence, and their material is unknown. Other things besides the crescents were apparently found, but they were not of gold, and the flat bronze axe was amongst them, all being found in a square stone cist.

This is the only instance in Europe where crescents have been found in association with any other objects. It is therefore satisfactory to be able to report that the evidence for this association, which has been doubted, has been confirmed by two eye-witnesses. It follows that these crescents belong to the Early Bronze Age, when flat axes were in use.

In addition to the middens at Harlyn Bay and Constantine there is a large midden inland amongst the sand-dunes about a quarter of a mile east of Constantine Island. Remains of limpets and cockle shells are abundant in the rabbit-scrapes. Mr. C. G. Lamb of Cambridge pointed out the site of a flint-factory on the cliffs about 700 yards south-east of Dinas Head, where large numbers of flint flakes occur. Dr. Haddon has in his possession a large number of worked flints and flakes from here. They are found most thickly round a small cove, and gradually die away southwards; but they begin to appear again on the cliffs some 200 yards north of Constantine Island, on which also they are found. The flint from which these flakes were struck occurs as pebbles of no great size in the sand of the raised beach. The pebbles are suitable for the manufacture of arrow-heads and small scrapers. All the flint flakes are small and have certainly been struck from these raised beach pebbles. In some cases part of

¹ It is curious that bronze axes and other bronze objects should often be mistaken for gold, but that real gold is regarded as brass! The Battle hoard (Sussex) was not recognized as gold by the finder.

The recent discovery of silver at Traprain Law

By A. O. CURLE, F.S.A., Local Secretary for Scotland

IN the early summer of 1919 a memorable discovery was made on Traprain Law in the county of Haddington, a hill on the East Lothian estate of the Rt. Hon. A. J. Balfour. From the natural advantages for defence which the hill presents, as well as from the plentiful surface indications of occupation, the Society of Antiquaries of Scotland had concluded that the site was well worth excavating, and had begun work on it in the summer of 1914. This was continued during the following summer till operations were suspended by the war. One of the results of these two seasons' exploration was the revelation that beneath the turf were four well-defined floor-levels referable to periods of occupation dating from the first to the fourth, or commencement of the fifth, century of our era. In May last year the latest of these floor-levels had been removed, and the second was just being loosened with the point of the pick when a remarkable hoard of Roman silver plate was discovered buried in a hole some two feet in diameter and two feet in depth. No evidence remained of any sack or box in which it might have been contained, but the pieces lay jumbled in a mass as if they had been thrown in disorder into the hole. Few of them resembled silver—to such an extent had the treasure been affected by its long burial in the soil—and a dull leaden hue with a tinge of purple best describes its colour. Its condition otherwise bore eloquent testimony to the treatment it had received at the hands of its owners previous to its concealment.

It was a strange assortment of plate (fig. 1). A few pieces—a small triangular bowl with a beaded edge (fig. 2) and one or two small bowls of ordinary form with broad rims and similar edging—were practically complete, but most of the objects were crushed, folded, and disfigured in a ruthless fashion. Odd portions predominated, many being folded up into packets, and bearing plentiful testimony to the free application of the axe and the hammer. A scrutiny of the pieces where decoration was exposed, revealed a mingling of pagan and Christian symbolism, and suggested the ingathering of the loot from diverse sources. A small strainer showed the *Chi-Rho* monogram formed by the perforations in the bottom of it, while similarly formed around the side ran the legend 'Iesus Christus'. Such an object there seems little doubt was a *colatorium*,

the water-worn cortex remains to prove it. A tanged and barbed flint arrow-head of very fine workmanship, found in the neighbourhood, is preserved in the Harlyn Bay Museum.¹

Two other remains must be mentioned. One consists of a group of stones of white quartz which appear to have been set up in some sort of order on Trevoise Head about 230 yards south-west of the coastguard station. Dr. Haddon thinks they may represent the remains of a small *allée couverte*. The stones are uncovered and have been disarranged. They are of no great size, and it is difficult to account for their presence without invoking human agency. Lying about on the headland and built into the field-walls are a number of large blocks of quartz and of red elvan, possibly the remains of megalithic structures.

Almost opposite Constantine Island, near the ruins of a modern hut, are the remains of what appears to have been a grave or hut of slate. The slabs are much disordered, and it is impossible to make anything of their arrangement; but they lie on the *top* of the raised beach, and must have been placed there for a purpose.

There are some Roman coins in the Harlyn Museum, without details, but all were probably found within a short distance of the museum.

General conclusions. From the diagram on p. 48 of the handbook it appears that the old surface-level from which the graves of the cemetery were dug was a raised beach of dark sea-sand. This is now covered with about 12 ft. or 13 ft. of light yellow shell-sand of recent, subaerial origin, with no midden-relics or other human remains. The relations of the midden at the Harlyn cemetery to this recent overlying deposit on the one hand and to the raised beach on the other are not determined, nor is any coherent account of the midden itself to be found in the handbook. One fact, however, seems certain: while at Constantine Bay the recent blown sand contains whole shells and other midden-relics, at Harlyn Bay it contains none at all. It is clear that the sand-dunes had not reached the site of the cemetery before the graves were dug. Moreover, the blown sand which now covers the whole of the isthmus between the former island of Trevoise Head and the mainland, has all originated in marine action at Constantine Bay.

¹ In passing it may be observed that the use of these small 'drift' pebbles accounts for some of the so-called 'pygmy' flints elsewhere. These generally occur in a region where flint does not occur naturally in veins in the chalk, but only as derived pebbles. Thus, 'pygmies' are reported from near Ifley, Oxon. (Mr. J. Montgomerie Bell), and in the country to the north of Oxford. I found a very perfect diminutive scraper in a field near Coombe, Oxon., where a few stray *unworked* flints could also be picked up, doubtless brought there by glacial action.

used in some early church for straining the communion wine. Two halves of a vase or flagon in high relief bore a series of scenes from Scripture—two from the Old Testament, 'The Fall of Man' and 'Moses striking the Rock', and two from the New, 'The Adoration of the Magi' (fig. 3) and 'The Betrayal'. Here,



FIG. 1. The Treasure in the condition in which it was discovered.



FIG. 2. Small triangular Bowl with beaded edge.

too, we have probably a church vessel. Paganism was represented by a figure of Pan, on one half of a small flagon, also by Venus, Hercules, and Amphitrite. The bulk of the pieces, however, bore no devices assigning them to either category. There are no less than eight spoons, four of which are shown in fig. 4. The date of the deposit was not difficult to fix approximately.

Previously the latest occupation had been placed by coin evidence about the beginning of the fifth century, and the coins found with the hoard bore this out. They were four in number, one each of Valens and of Valentinian II, and two of Honorius, A.D. 395-423. These coins were in such a condition as showed that they could not have been long in circulation. Though all pieces of the plate are probably not of the same date of manufacture, the greater part shows features of style indicative



FIG. 3. Portion of Flagon depicting the Adoration.

of the fourth century of our era. The prevailing motif is an edging of beads, ranging in size on different specimens from a bead the size of a pea to one the size of a marble. Such an edging was much in vogue in the Roman Empire in the fourth century. In the pagan cemeteries at Vermand and Abbeville, which are believed to have been closed about A.D. 395, small bowls identical in form with those from Traprain Law, but in bronze, have been found, and others have come to light elsewhere in Western Europe. But the style is not confined to such bowls, and

will be found on other articles of metal of the period. The weight of the treasure is some 770 ounces.

After being carefully annealed to restore its pliancy, the folded



FIG 4. Spoons.

fragments and dishes have been opened out, and where possible related pieces have been brought together. The art displayed is without doubt that prevalent in the Roman Empire in the fourth century, with here and there strong evidence of Eastern influence.

Of Celtic influence, such as vessels produced in this country might have shown, there is not a trace. Further, as pointing to a Continental source for the plunder, there occurs among all the silver utensils and fragments of such things a small group of personal ornaments consisting of a brooch, two strap terminals, a couple of buckles, the mountings of a narrow leather strap, and an object that is possibly an ear-ring (fig. 5). Now these articles are

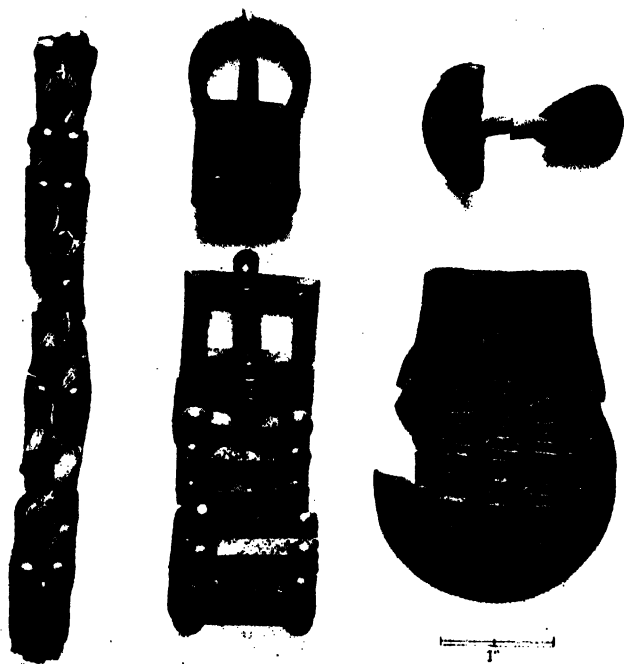


FIG. 5. Some of the Teutonic Ornaments.

distinctly Teutonic in their style, and the key to their provenance is probably furnished by the brooch. That is without doubt Visigothic. Such brooches are not found in Britain nor in the West, but examples are recorded from the Crimea and from Hungary. Two years after the sack of Rome in the year 410 the Visigoths under Ataulf wandered westward and settled in Gaul along the southern shores and by the littoral of the Bay of Biscay. At that time the Saxons were carrying on their piratical raids on the coast towns of western Gaul, harrying and plundering in ruthless fashion, careless of anything but booty. It is at least

a plausible theory that one or more bands of these sea-rovers joined in a foray into the region occupied by the Visigoths, sacked and burned church and homestead that lay in their tracks, and bore their booty off to sea. To such an extent do single halves or pieces thereof appear in the hoard that an equal distribution between two bands of the marauders is suggested. What was the further adventure of the spoil we cannot tell, beyond the fact that it was ultimately brought to the top of this Haddingtonshire hill. Scanty indeed as are the relics of the latest occupation, they do not suggest a Saxon connexion. One fact stands out clear. An imminent danger threatened the possessors of the silver treasure. The chance of escape encumbered with their wealth was too small to risk. Hastily it was thrust into the ground, and the owners passed to their fate leaving none to know the spot wherein their wealth lay buried.

An imperfect Irish shrine recently purchased by the Royal Irish Academy

By E. C. R. ARMSTRONG, F.S.A., Local Secretary for Ireland

THE Royal Irish Academy recently purchased from Mr. H. Naylor, a Dublin dealer, a portion of an Irish shrine together with two fragments supposed to have belonged to it. These had been obtained at the sale held at Killua, co. Westmeath, early in June 1920, having formed part of a large number of Irish antiquities collected by Sir Benjamin Chapman, fourth baronet.

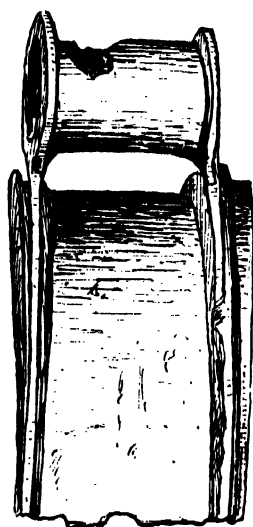


FIG. 1. Side of Shrine to show handle. ($\frac{1}{2}$)

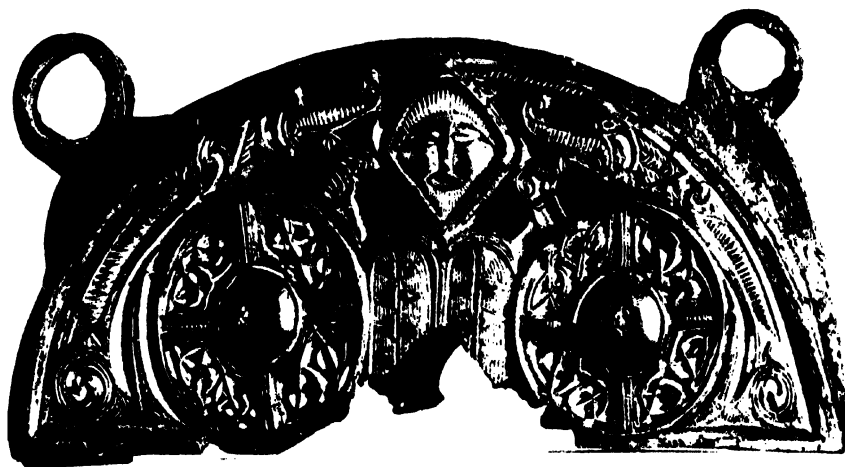
No catalogue recording the localities or origin of the specimens appears to exist, and Mr. F. Crofton Rotheram, of Belview, Crossakeel, co. Meath, who helped Sir Montagu Chapman to arrange the collection many years ago, has informed me that few of the specimens were localized.

The history of the shrine portion therefore is at present unknown. It is uninscribed, so its dating must rest upon stylistic grounds.

As will be seen from the illustrations it is semicircular in shape, measures 5.2 in. in length, 2.3 in. in height, and 1.2 in. in breadth. At each side (plate V and fig. 1) is a pierced tube 0.7 in. in diameter, suggestive of handles, which would appear to have been used for suspending the reliquary on certain occasions round the neck of its custodian. It may, however, be objected that the form of the tubes is hardly a practical one for handles, and their use as such is not insisted upon.

The shrine is made up of cast bronze plates, and is enriched with settings of amber. The front is gilt, and the design upon it is cut out of the bronze plate, but on the side to the observer's left can be seen the broken part of a gilded bronze plate, which appears, as there is a nail to fix it to the other side, to have been carried across and to have closed in the part at present open.

The principal feature of the decoration is a conventionalized male figure whose face is framed in a raised lozenge, the topmost point



THE KILLUA SHRINE. FRONT AND BACK
(SLIGHTLY UNDER NATURAL SIZE)

of which projects 0.2 inches over the face; the eyes are long, the mouth is placed directly below the nose; a beard and hair are shown; the ears are placed outside the lozenge. Possibly this framing was intended to indicate a hood with a pointed top; but, if so, it is difficult to understand the ears being placed outside it. The arms are raised and the fingers clenched, apparently grasping the lower jaws of the confronting animals. The body is divided down the centre, and on each side it is ornamented with triangles placed base to base on either side of a beaded line, the background being shaded.

This figure does not resemble those to be seen on the shrine of St. Maodhóg, nor the later examples carved on the Irish high crosses. The figures on the shrine of St. Manchán are more akin to it, in that they have elongated eyes, but the faces of the St. Manchán figures are larger and narrower; the nose is differently formed and in no case is the mouth placed directly below it.

At each side of the human figure is placed a conventionalized animal with a head recalling that of a crocodile, whose long turned-back mouth is opened and appears to be biting the ear of the figure. The two crocodile-like animals resemble each other in form, but differ in certain details. Their eyes are placed above the ending of the upper jaw. In each case the fore limb is returned on the body. The hind limb is well marked; its upper portion begins with a spiral, while the lower part, showing two toes, is curved round the outside of the amber-centred disc. The bodies of the animals are ridged.

A human figure supported on each side by animals is an ancient and widely spread design.¹ A variant of this, in which animals gape with open jaws on each side of the figure, is not uncommon in Irish Christian art. In metal work it may be seen on the shrine of the Stowe Missal, where it occurs thrice, in one example being combined with a second pair of supporting animals.² The same duplicated form, with the lower animals replaced by human figures, is found on the Carndonagh cross, co. Donegal.³ Salin⁴ has figured examples of Scandinavian metal-work showing animal forms gaping at each side of a man's head.

A disc 1.3 inches in diameter, with a central setting containing a half-bead of amber with an attachment through the centre, is placed on each side of the body of the figure. From the setting radiate four arms making a cross. On the panel to the

¹ See Evans, *Journal of Hellenic Studies*, xxi, pp. 163-9.

² Warner, *Henry Bradshaw Society*, xxxii, plates III, IV, v.

³ Crawford, *Journal of Royal Society of Antiquaries of Ireland*, xlv, p. 185.

⁴ *Die altgermanische Thierornamentik*, figs. 394, 490.

observer's left the tops of all the arms are beaded ; in that on the right the top one is plain.

The spaces between the arms are filled with raised interlaced work. It may be noticed that in the upper left panel of the disc, to the observer's right, the band is divided in two by a ridge.

It will be seen that the details of the supposed handles of the shrine differ ; also that at the head of the figure to the observer's right is a ridged band which extends as far as the top of the animal's eye ; this is not repeated on the left.

The ornamentation of the back of the shrine, on which there is no trace of gilding, may now be described. Its circumference is decorated by a band of knot-work interlacing derived from a four-cord plait, placed over a hatched background. Below this is a raised cross having in the centre an amber half-bead inserted in a circular socket within a quatrefoil setting. The three complete limbs of the cross end in what are apparently meant for hands, though the circular form of the edge has caused the designer to make the thumb longer than the fingers. It is probable that the fourth limb also ended in a hand, for the line confining the design seems to have been carried across, and this would hardly have allowed space for any other form of termination.

In the two upper spaces between the arms of the cross are engraved two conventionalized animals similar in structure though differing in detail. Their general form and front and hind limbs can be easily detected. They may be compared with Salin's figure 565 a. The lower spaces were filled with a running design of whorls, the spandrils being ornamented with trefoils.

The two fragments obtained with the shrine, supposed to have formed part of it, consist of a damaged gilded bronze plaque (fig. 2) measuring 1.6 in. in length from the unbroken edges ; when complete it was apparently square. It is ornamented with a cross placed saltirewise, having at the centre and at each of the arms sockets set with half-beads of amber, of which only two remain. The spaces between the beaded arms of the cross are decorated with spirals of the same form as those on the front of the shrine which mark the junction of the animal's limbs.

The other fragment (fig. 2) is merely a socket, showing traces of gilding, set with a half-bead of amber having an attachment through its centre. I am unable to suggest a reconstruction of the missing portion of the shrine to include these fragments.

The shape of the shrine portion would suggest that it was that part of a bell-shrine which enclosed the handle of the bell. Comparison both in shape and decoration with the handle of the *Corp-Naomh* bell-shrine, though of considerably later date, is

inevitable. A consideration, however, might be urged against this if the two tubes are considered to have been handles. For had the lower part which enshrined the bell been in proportion, it would have been too heavy to have been suspended by the top. It may be remembered that the handles on the shrine of St. Patrick's bell are attached to the centre of the lower and heaviest part of the shrine.

Two bronze plates strongly riveted to the sides of the Killua shrine, and broken off where the portion ends, can be seen. These were evidently the attachments for the lower portion of the shrine.

The shape of the top of the shrine is so like the top of a bell-shrine that possibly it was made to enshrine a portion of a bell, the lower part of which was broken, thus requiring only a small case, whose weight would have allowed it to be lifted by the top, always supposing that the two tubes were handles.

The next point is the date to which the Killua shrine is to be assigned. Its ornamentation, omitting the human figure and the cross, falls into three classes—spiral, interlaced, and zoomorphic.

The spiral ornament is early in type, and on these grounds alone I should not consider the shrine to be later than the eighth century. The interlaced ornament is of a simple character not unlike that found in the Book of Durrow. The deciding point with regard to the zoomorphic ornament seems to be the occurrence of the spiral; for, according to Salin,¹ the two occur together first in the Book of Lindisfarne, which may be dated early in the eighth century. Zoomorphic combined with spiral ornament which can be dated early in the eighth century is also met with in North Europe, being a feature of Salin's 'Style III'.

It would therefore seem that the Killua shrine may be provisionally dated to the eighth century.

¹ *Op. cit.*, p. 357.

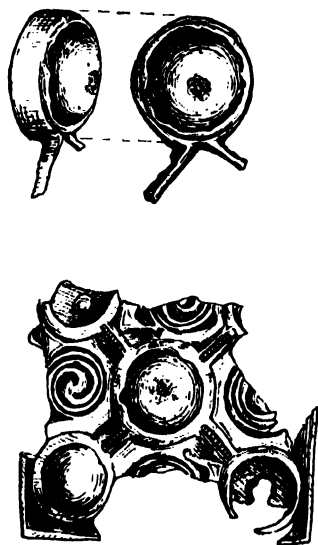


FIG. 2. Fragments supposed to have formed part of Shrine. (†)

John Plummer, Master of the Children

By C. JOHNSON, M.A., F.S.A.

THE following document is of some interest as illustrating the history of the 'Children of the Chapel Royal', which is not yet worked out for the fourteenth and fifteenth centuries.¹

John Plummer is mentioned as one of the clerks of the King's Chapel in 1441,² receiving a grant of £10 on the 12th April in that year. The grant of forty marks a year for the maintenance of the eight singing-boys, here mentioned, is dated 4th November 1444,³ and from that date onwards it may be presumed that they ceased to draw their clothing from the great wardrobe. On 24th February 1445 Plummer was formally appointed their teacher and governor.⁴ On 30th May 1446 the grant of forty marks, charged on the ulnager of Bristol, was renewed.⁵ This grant was presumably rendered invalid by the Act of Resumption of 1449, but it does not appear certain that the following warrant for its revival took effect, since no Letters Patent in pursuance are to be found in the Calendar of Patent Rolls. A similar grant of forty marks a year was granted to Plummer's successor, Henry Abyndon, on 16th March 1456,⁶ to date from his appointment at Michaelmas 1455. This grant was renewed by Edward IV on 10th July 1465.⁷

PUBLIC RECORD OFFICE.

Warrants (Chancery), Series I, File 764.

No. 9426 (29 Henry VI), A. D. 1451.

Memorandum quod istud breve liberatum fuit domino Cancellario Anglie apud Westmonasterium xiiij^o die Maii anno subscripto exequendum.

Henri by the grace of god Kyng of Englande and of Fraunce and Lorde of Irland To the most reverent fader in god Johan Cardinale Archebyssshope of York primat of Englande oure Chaunceller, gretyng. We late you wite that we have understande by a supplicacion presented unto us on the behalve of our welbeloved servant Johan Plummer oon of the Clercs of oure Chapell within oure housholde and the Children of the same, howe that when they had thaire fynding in

¹ See Dr. Grattan Flood's article in *E. H. R.* for 1918 (vol. xxxiii, p. 83).

² *Cal. Pat. Rolls*, 1436-41, p. 519.

³ *Cal. Pat. Rolls*, 1441-6, p. 311.

⁴ *Ibid.*, p. 333.

⁶ *Cal. Pat. Rolls*, 1452-61, p. 279.

⁵ *Ibid.*, p. 455.

⁷ *Cal. Pat. Rolls*, 1461-7, p. 457.

oure greet warderobe, they lay there by v. or vj. wekes for to sue for thaire clothyng and other necessities and often tymes thay myghte not be spedde, and so oure Lady masse and dyvyne service in oure saide Chapell was not doon, ne myghte not by thaim as it shulde have be. And also thaire goyng to oure saide warderobe letted thaim greetely of thaire lernyng. Wherupon we by thavis of oure Counsail sezing the saide inconvenientes, commaunded the saide Johan to ordeine for the fyndyng of viij. Children of oure saide Chapell for the whiche charge and good service that the saide Johan had doon unto us and sholde doo, graunted unto him xl. marc' by our lettres patentes yerely to be paide of the aunage and subside of oure Towne of Bristowe as in oure saide lettres patentes it is conteigned, the which xl. marc' is resumed into oure handes by thauctorite of oure parlement late holden at Leycestre. And so the saide Johan hath founden the saide Children sithe the feest of Saint Michel the yere of oure Regne xxviiij unto this tyme at his owne propre goodes unto his greet charge and hurte withoute oure special grece be shewed unto him at this tyme. Wherfor we tendrely considering the premysses have of our especiall grace graunted unto the saide Johan as well for the service that he hath doon unto us by longe tyme passed and shall do in tyme to come in kepyng of oure Ladye masse in oure householde as in fyndyng gouverning and techyng of the saide viij. Children for oure saide Chapell xl. marc' to have and take yerely from the feest of Estre last past duryng the tyme that the saide Johan shall have the kepyng of the saide Children or of any other in the stede of hem of thissues profites Revenues and commoditees commyng of oure manoirs of Solyhull and Sheldon with thaire appurtenaunces in the countee of Warrewik by the handes of the Shirrief of the same Countee fermours Baillifs Receyvours Approvers or any other occupiours of the saide manoirs and either of hem for the tyme beyng, at the feestes of Saint Michel and Pasche by evyn porcions. So we woll and charge you that herupone ye do make oure lettres patents with oure writtes of liberate Currant and Allocate dormant in due fourme. Any Act of Resumpcion made or ordeygned in this oure present parlement extende not, ne be prejudicall in any wyse to oure saide graunte. Or any other statute act ordinaunce provision Resumpcion or commaundement in contrarie herof made notwithstanding. Yeven undre oure prive seel at Westminster the x. day of May. The yere of oure Regne .xxixth.

FRANK.

The Discoveries at Spiennes

By M. AIMÉ RUTOT, Hon. F.S.A.

FOR the past sixty years the environs of the village of Spiennes, south-east of Mons in Hainault, Belgium, have continually provided archaeologists with evidence in great abundance. The banks of the Trouille valley have been inhabited almost continuously since man first appeared on the earth, that is since the beginning of quaternary times. The relics of these successive occupations by man are distributed according to their date on three of the four terraces, at the respective elevations of 266, 233, 100, and 7 feet above the river level. On the 233 ft. terrace is found an industry of considerable interest, still almost entirely of eolithic character and typical of the first transition from the primitive industry to the palaeolithic. On the 100 ft. terrace a seam of flints at the base of the early alluvium contains an enormous development of the first palaeolithic industry which was named pre-Chelles by the late Professor Commont. This is the industry corresponding to the Piltdown skull in England, and to the second (133 ft.) and third (83 ft.) terraces of the Somme valley at St. Acheul. It also occurs on the high ground of North Kent (Swanscombe, Galley Hill, etc., on the 100 ft. terrace).

In the railway-cutting at Spiennes the pre-Chelles group includes, among hammers, knives, side-scrapers, end-scrapers, and borers, the earliest weapons known, which give a palaeolithic character to the whole industry. These weapons are pointed for offensive purposes, or take the form of rudimentary daggers and maces (*casse-tête*) of flint; and it may be mentioned that the large piece of elephant bone from Piltdown corresponds to the flint maces of Spiennes.

Professor Commont, in establishing the pre-Chelles industry, confused two industries which can be clearly distinguished at Spiennes and elsewhere in the Haine valley. Besides the pre-Chelles group properly so called there is the Strépy series. Before the Chelles period the splitting up (*débitage*) and shaping (*taille*) of flint were practically unknown, nearly all the implements and weapons being adapted from nodules, which give the industry a coarse appearance. The Strépy industry, on the other hand, is marked by a systematic splitting and fashioning of the flint, though there is always a minimum of flaking, just enough for the use intended.

The flint-seam of the 100 ft. terrace also contains a fine series of typical Chelles implements, as in the Somme and Thames

valleys. Lastly, at the base of the upper quaternary loam is clearly seen the lower phase of Le Moustier, with side-scrapers, typical points, and hand-axes, accompanied by a cold fauna including mammoth, woolly rhinoceros, and reindeer.

On the low terrace there comes first the Mesvin industry, of eolithic appearance but of lower St. Acheul date; and above that are sandy beds containing upper St. Acheul flints of rather peculiar type. Still higher, at the base of the upper loams, extends a vast factory-site of lower Le Moustier date, with hand-axes.

The Aurignac, Solutr , and La Madeleine stages are not represented at Spiennes, but that of Mas d'Azil exists in the neighbourhood, to the north and east. The Mas d'Azil culture, the latest palaeolithic horizon, is followed by that of Tardenois, which is represented in adjacent districts but not at Spiennes itself. Then comes a fine succession of neolithic industries, which developed on the plateaux and slopes. At Spiennes the neolithic opens with the industry of Le Fl nu, which might be taken for pre-Chelles specimens if the geological conditions were not so different. Le Fl nu comprises first a flint industry of eolithic aspect, then primitive weapons, such as points for attack, daggers, and maces.

Eventually, on the same site, this savage population made continual progress, re-inventing the art of flint-chipping, and so passing rapidly, by stages corresponding to Chelles and St. Acheul, to the well-known culture of Spiennes, with its numerous chipped celts, shell-mound axes (*tranchets*), etc. This is the lower Spiennes horizon, corresponding to Le Campigny. Gradually the inhabitants took to polishing their implements and thus passed into the age of polished stone or upper Spiennes culture. In Belgium this is followed by the phase of Omal, which closes the neolithic period. Characteristic are the hut-circles of Hesbaye (west of Li ge), but Omal is not represented at Spiennes. From the same locality two complete skeletons of Le Fl nu men have been recovered, also one skeleton and fragments of the polished stone period. Many animal bones of the same period as well as remains of food are preserved in Brussels Museum. These have been named, and show that in the age of polish there were still no domestic animals. Coarse pottery and implements of bone or red-deer antler complete the list of finds. To finish the archaeological story, mention should also be made of Gaulish and Roman remains, as well as of a Frankish cemetery of the fourth century with many richly furnished burials. Most of the material from Spiennes is deposited in the Royal Museum of Natural History at Brussels.

An early pewter coffin-chalice and paten found in Westminster Abbey

By the Rev. H. F. WESTLAKE, F.S.A.

IN a paper read before the St. Paul's Ecclesiological Society as far back as 12th November 1885, the late Sir William Hope laid down the main principles to be adopted in determining the dates of early chalices and patens of English manufacture. So far as I am aware nothing that has been written since has served to modify these principles in any marked degree. He classified the pre-Reformation chalices in eight sections. Between the first four and the last four of these there was a marked distinction, due to the spread in the fourteenth century of the custom of laying down the chalice on the paten to drain after the ablutions. The effect of this custom was the abandonment of the round-footed chalice, which would be unstable in such a position, and the making of chalices with hexagonal bases. For as practical a reason the hemispherical design of the bowl of the chalice was abandoned in favour of a conical shape which would drain the more easily in such a position.

The chalice under review belongs to the earlier or round-based group, and it will be convenient, therefore, to note the four subdivisions into which this group may be separated :

Type A. c. 1200-c. 1250.

Broad and shallow bowl. Stem, knot, and foot plain and circular.

Type B. c. 1250-c. 1275.

Broad and shallow bowl. Stem and knot wrought separately from bowl and foot, one or other (or both) polygonal, foot plain and circular.

Type C. c. 1275-c. 1300.

Broad and shallow bowl. Stem and knot as in *B*; circular foot, but the spread worked into decorated lobes.

Type D. c. 1300-c. 1350.

Bowl deeper and more conical. Otherwise as in *C*.

One further distinction remains to be drawn. The earliest chalices are found to have a quasi-lip, but this seems to have been soon abandoned. Its occurrence, therefore, in a particular chalice may be of as much, or perhaps more, importance than other characteristics which divide the sections. Of the earliest section but three examples were known to survive in 1885. Two of these are at Chichester and Lincoln respectively, and the third, which

until recent years was in use at Berwick St. James, Wilts., is now at the British Museum. I shall claim that this example from the Abbey provides a fourth. As will be seen from the illustration, it has this quasi-lip as well as the other characteristics of Type *A*. What, perhaps, the picture does not completely show is that the base is circular.

The chalice and paten were found in a stone coffin accidentally disclosed in 1913 near the Vere monument in the east aisle of the north transept. The coffin had evidently suffered one removal at



Pewter coffin-chalice and paten from Westminster Abbey.

least from its unknown original place of deposit. The lid with a cross may still be seen close to where it was found. The chalice and paten were replaced with the bones of the occupant of the coffin, which is now sealed by the pavement of the aisle. It is not possible now to determine to whom the coffin belonged, but if the chalice may be allowed to date it as belonging to the first half of the thirteenth century, it may well be that the bones are those of Abbot Richard de Berkyng, who died in 1246 and was first interred in the old Lady Chapel. Like Katherine de Valois, he must have been removed when the chapel was demolished, but no trustworthy record remains to show where. The arguments for this identification depend mainly on the elimination of other possibilities and need not here be detailed. To Mr. Thomas Wright, Clerk of the Works, belongs the credit of photographing the chalice and paten before their replacement, and thus preserving a record of some importance which would otherwise have been lost.

Notes.

Inspectors of Ancient Monuments.—The Inspectorships of Ancient Monuments for England, Scotland, and Wales, in the Department of Ancient Monuments in H.M. Office of Works, which hitherto have been half-time appointments, have now been put on the establishment as whole-time posts. Major J. P. Bushe-Fox, F.S.A., is appointed Inspector for England, Mr. W. J. Hemp, F.S.A., Inspector for Wales, and Mr. J. S. Richardson, Inspector for Scotland.

Ordnance Survey: appointment of Archaeology Officer.—The appointment of Mr. O. G. S. Crawford, B.A., as Archaeology Officer of the Ordnance Survey is an interesting new departure, for which antiquaries will be grateful to the Director-General, Col. Sir Charles Close. Hitherto any local assistance given to the Survey in its task of recording the sites of discoveries and vanished buildings has been spasmodic and unorganized; and a special effort will now be made to collect and examine local information in each district as the various sheets of the Survey map come up for revision. To this end an appeal will be made to the Congress of Archaeological Societies, of which Mr. Crawford is the new secretary; and specially qualified individuals will be asked to act as official correspondents, with certain privileges as regards the maps covering the area concerned. All available printed material will also be utilized, and the utmost done to complete a piece of work that only a Government department can undertake.

Corpus of Runic Inscriptions.—Professor Baldwin Brown and Mr. Bruce Dickins of the University of Edinburgh have undertaken to prepare for publication by the Cambridge University Press an annotated Corpus of Runic Inscriptions in Great Britain, carved, incised, or represented in relief on or in stone, bone, wood, metal, or other such material. Runes in manuscripts will not be included, nor will those in the later Scandinavian characters in the Isle of Man, for with these Mr. Kermodé has dealt fully in his recent work on the Manx Crosses. Apart from these, the number of such monumental runic inscriptions, including those on coins, is not very great, and a considerable body of material is already prepared, but with a view to completeness the compilers will be most grateful if antiquaries interested in the subject will report any examples with which they are acquainted. Runic inscriptions in the larger and better-known public collections or published in archaeological works of national scope are naturally already on the list, but particulars are desired of objects in private possession or in local museums.

British Museum Guide-books.—New editions of two British Museum Guide-books have recently been issued, and the price has been raised in either case to half a crown. That dealing with Greek and Roman life was first published in 1908, and now appears with twenty-two extra illustrations. The Bronze Age Guide, after serving for sixteen years, has been considerably rewritten, and enlarged by forty-seven illustrations and thirty pages of text. An attempt has been made to

trace the origin and development of leading types—the celt, halbert, rapier, sword, spear-head, and buckler—before a description is given of individual objects in topographical order. The collection was greatly enriched in 1909 by Mr. Pierpont Morgan's gift of Canon Greenwell's gold and bronze specimens.

British Museum Medieval Collection.—The medieval collections of the British Museum, transferred from the former Medieval Room to the west end of the King Edward the Seventh Galleries (lower floor), have been open to the public since July. The gold ornaments, including the Franks and Waddesdon collections, are still withdrawn from exhibition, and it is feared that some time may elapse before accommodation is provided for them.

In many ways the collections do not gain by their change of place. They are taken out of their historical sequence and cut off from their former neighbours to accompany porcelain and pottery; the sense of unity suggested by the occupation of a single room is lost in the immensity of the new gallery; the discontinuous pier-cases projecting from the walls are not so well adapted as the old wall-cases for the exhibition of continuous series. The homelier objects illustrating domestic life are to some extent crowded out by lack of space, and where shown seem exiled in their present architectural environment. On the other hand, the substitution of lighting from both sides for the old top-lighting has undoubtedly proved of advantage to other kinds of objects, such as enamels and fine metal-work, especially to reliefs of all kinds: the ivory carvings, seals, and alabasters have all profited by their migration, and familiar friends like the Grandisson ivories are seen better than ever before.

In the cases along the north side of the gallery are arranged: Ivories and Alabasters, Enamels, Church metal-work, and English seals. Along the south side are: Foreign seals, Domestic metal-work, Minor Sculpture, Clocks and Watches. The table-cases in the several bays contain as far as possible objects complementary to those in the adjoining cases; while the contents of cases down the middle of the gallery are connected with the collections opposite. A popular feature is the tall clock by Isaac Habrecht, formerly at the top of the main staircase, but now standing free and kept going, to the evident pleasure of visitors. The armour is somewhat inadequately displayed in two cases set against the large piers at the west end.

When arrangements for due security have been completed, the Waddesdon Collection and the other objects of high intrinsic value formerly in the old Gold Ornament Room will occupy the two extremities of the gallery.

Wayland's Smithy, Berkshire.—Owing mainly to the zeal and pertinacity of Mr. Harry d'Almaine, Town Clerk of Abingdon, enough is now known of the famous monument called Wayland's Smithy, on the Berkshire Downs near the White Horse, to correct the false impression given in *Kenilworth* by Sir Walter Scott, who never saw what he called the Cave. It is scheduled as an ancient monument, and Mr. Peers, the Chief Inspector of Ancient Monuments, with Mr. Reginald Smith supervised the recent excavations, for

which the Earl of Craven not only readily gave permission, but also provided the labour. Mr. d'Almaine and Rev. Charles Overy rendered much assistance, and Mr. Dudley Buxton has examined the human remains discovered. The results are to be communicated to the Society early in the session, and will be found to confirm in the main a sketch made by John Aubrey about 1670. As may be seen in the present number of the *Journal*, it is to Aubrey also that we owe the discovery of the ring of sockets within the rampart at Stonehenge; and the value of such early records increases with every vindication of their accuracy.

The excavation of Segontium.—Excavations have been carried out in half an acre of land immediately outside the wall of the Roman fort of Segontium, at Carnarvon, during August, September, and October last, under the superintendence of Mr. A. G. K. Hayter, F.S.A. Two ditches have been found, both double. The outer ditch had been discontinued for a space of about 30 ft. on the west side. Both arms end abruptly. The gap lies just south of the centre of the west wall of the fort and should indicate an entrance, but the road metalling fails within 30 ft. of the outer ditch. During excavations four wells were discovered. Some rubbish pits have been emptied and their contents have added to the finds, which include fragments of pottery, brooches, and coins. These date from the first to the fourth century. Some leather includes one piece 14 in. by 16 in., with needle holes along one edge, and a metal-studded leather boot. No foundations of houses have been uncovered, but some post-holes and traces of timber and wattle indicate the existence of wooden buildings of some description. It is hoped that next year subscriptions to the Segontium Excavation Fund will enable the Excavation Committee to open up some of the land within the wall of the fort. An interim report on the work will appear in *Archæologia Cambrensis*.

Excavations at Bryn y Gefeilian, Carnarvonshire.—Preliminary excavations were carried out in February and March last on a Roman site lying in a bend of the river Llugwy between Capel Curig and Bettws y Coed. Operations began on a group of buildings ranged round a square of about 140 ft. to 150 ft. On the western side the existence was established of a continuous range of rooms, 120 ft. long by 24 ft. wide, with walls from 4 ft. to 5 ft. high in places. Parallel to this a wider range of the same length of a more elaborate plan was excavated, with several small rooms at the northern end, all showing considerable evidence of alteration and rebuilding. The northernmost room, with part of the passage leading to it, was floored with large slabs of slate with sawn edges, which can be paralleled on other sites in North Wales. The floors of the other rooms were of clay. In this slate-floored area were found portions of several large amphoræ, but otherwise little pottery or other material was recovered from the rooms. A considerable amount of pottery was, however, found in a layer lower than any of the existing buildings. All this can be dated between about A.D. 80 and A.D. 120. Other finds included a considerable number of small pieces of lead, some of it worked: portions of glass bottles, etc.; *scoriæ* and remains of hearths, suggesting that this part of the site may

have been used as workshops. No coins were found. The extreme limit of the pottery so far found seems to be at about A.D. 150.

Five hundred feet to the east of these buildings a trial trench was cut through a slight bank and ditch, disclosing the remains of a loose stone rampart and of two ditches of a fort. The approximate distance from the top of the rampart to the outer edge of the ditches was 50 ft. The other boundaries of the camp have not been accurately determined as yet, but it is probable that the area is about 3 acres and that the buildings to the west are contained in an annex, of which the boundaries are suggested by slight banks, sufficient to preserve the site from inundation during floods. The pottery from the trench is also not later than the middle of the second century.

Date of the Boulder-clay in Suffolk.—The results of excavations undertaken in the summer by a party of subscribers at High Lodge, near Mildenhall, Suffolk, were communicated to an extra London meeting of the Prehistoric Society of East Anglia on 20th October. High Lodge, which has yielded a large number of hand-axes as well as flake-implements of Le Moustier character, has for years been a problem, and it was important to determine the relation between the brick-earth deposited on the western slope of the hill and the boulder-clay exposed on the roadside at the top. Skertchly's observations on this and kindred sites, incorporated in the Geological Survey Memoir of 1891 (sheet 51 NE.), have not met with general acceptance, and the trend has been rather in the opposite direction, owing to the alleged absence of human work in the boulder-clay. Mr. Reid Moir's recent discoveries at Ipswich and Professor Marr's analysis of the geology on the present occasion are all in favour of Skertchly's view; and the worked flints found deep below boulder-clay at High Lodge include end-scrapers on blades of the same order as the brick-earth finds 100 yards away. The orthodox English view is that the boulder-clays and other glacial deposits preceded the appearance of palaeolithic man, whose remains are found in what archaeologists call the Drift, that is, the terrace-gravels and contemporary deposits. If Skertchly's evidence is to stand, confirmed as it is by recent excavation, it must be admitted that the boulder-clay (or at least a boulder-clay) came not at the beginning but at the end of the Drift period, and can be identified with the Würm glaciation of Le Moustier times. Egyptian specimens of this period were shown at the meeting by Professor Seligman, who has followed in the steps of Pitt-Rivers and found *in situ*, beside the Nile, types corresponding to various stages of the palaeolithic in Europe.

Recent archaeological work in Italy.—Dr. Ashby communicates the following: During the year 1920¹ no discoveries of outstanding importance have occurred in Italy, and publication has unluckily fallen considerably behind, owing to difficulties which are nowadays felt the whole world over. In Rome itself the most important discoveries have been made underground, in the course of modern improvements; a new group of tombs has been found, in a district

¹ For 1919 see my reports on *Archaeological Research in Italy* in the *Times Literary Supplement*, January 15 and 22, 1920 (pp. 33, 50).

that had already produced many, near the Porta Maggiore. One chamber contains interesting views of the interior of a walled city; while another has a group of twelve men—not the Apostles, for there is no clear trace of Christian influence. On the north-west, in a new quarter near the British School, a part of the catacomb of Pamphilus has been rediscovered: we may note an *arcosolium* containing an altar faced with slabs of marble—the first that has been found in the catacombs. On the south a *hypogeum* with interesting paintings has been found on the Via Appia, which marks the transition between the use of cremation and that of inhumation, both rites being found.¹ Of the far more important tombs under the church of S. Sebastiano I have already spoken.² I may add that a first report on the tombs discovered near S. Paolo has recently appeared,³ and that a portion of them will remain permanently visible.

Outside Rome work continues both at Ostia and at Pompeii, though nothing in regard to the latter has recently been published. At the former the remains of a fine house on the Pompeian plan have been discovered below the later buildings, in which, to save space, the modern type of apartment house was largely used. Fronting on the main street, now cleared for nearly half a mile, a building which may be the temple of Augustus has recently been cleared.⁴

A description of an interesting group of houses, of the first half of the second century A.D., two of the apartment and one of the Pompeian type, remarkable for the interest of the paintings they contain, has recently been published by Calza.⁵ They probably had three stories above the ground floor, and were united by a common façade running along one side of the block, the centre of which was occupied by a garden, and the other side by a line of shops. The whole no doubt belonged to a single owner, who probably inhabited the 'Pompeian' house himself.

Calza further maintains that in the partial demolition of this group of houses and the use of part of the site as a rubbish heap, we have evidence of a sudden decline in the prosperity of the town, which he attributes to the greater importance given by Constantine to Porto, on the other side of the river. It had been previously dependent on Ostia, but now became the principal harbour of Rome and an independent episcopal see.

These are at present the two outstanding sites in Italy where excavation is going on without interruption. Important work is also being done at Veii, where the excavation of a temple, which produced some splendid archaic terra-cotta statues a few years back, is still in progress. From Sardinia comes news of further discoveries.⁶ Two marble heads, of the younger Drusus (?) and of Trajan, were found at Terranova (the ancient Olbia), and other sacred fountains and wells (one with a sanctuary erected over it, resembling that of Sardara) have been studied by

¹ Mancini in *Not. Scavi*, 1919, 49.

² *Times cit.*

³ G. Lugli in *Not. Scavi*, 1919, 285 (fully illustrated).

⁴ Giglioli in *Not. Scavi*, 1919, 3 sqq.

⁵ *Mon. Lincei*, xxvi (1920), 301 sqq.

⁶ *Not. Scavi*, 1919, 113 sqq.

Taramelli, though a more complete account of the dolmens in the neighbourhood of Buddusò has already been given.¹ We may also notice an interesting account of a Lucanian hill fort not far from Potenza,² of which I have given a fuller account elsewhere: and the fuller publication of some fine mythological bas-reliefs representing the sacrifice of Diana, the triumph of Bacchus, and a dance of Satyrs, found in a Roman villa near Sorrento, which may probably be identified with that of Pollius Felix, the friend of Statius.³

The rearrangement of the important collections of the Lateran in Rome is shortly to be described by Mrs. S. Arthur Strong; while we may also note the rearrangement of one of the more important of the provincial picture galleries, that of Ancona.

Reviews

Cowdray and Easebourne Priory in the County of Sussex. By SIR WILLIAM H. ST. JOHN HOPE, Litt.D., D.C.L., London: 1919. Published at the offices of *Country Life*. 14 $\frac{3}{8}$ x 10. Pp. xiv + 144, with 53 full-page Plates. £4 4s.

This fine book will have a special appeal to antiquaries, as being the last published work of one of the best antiquaries of his time. Sir William Hope did not indeed live to see its publication, but the marks of his care and thoroughness are everywhere apparent, and the result is admirably summed up in the preface contributed by Sir Aston Webb. 'All that is authoritatively known', he says, 'of historic interest concerning the land and buildings of Cowdray is here set down, for the future edification and information of all interested. The sources of all information are given—nothing is taken for granted—but the actual sequence of events is plainly described without adornment or unnecessary elaboration.'

The praise is well deserved, but full acknowledgment must also be made to the present owner of Cowdray, Viscount Cowdray, who on acquiring the estate in 1908 made it his business to repair and preserve not only the long-neglected ruins of Cowdray House, but also the remaining buildings of the Priory of Easebourne and the foundations of the early fortified house of the Bohuns on St. Ann's Hill by Midhurst, and by so doing made it possible for the book to be written.

Produced in a way worthy of the reputation of the proprietors of *Country Life*, with type, printing, paper, and illustrations of the best, the book is a fitting record of the collaboration of a cultured and public-spirited owner with an eminent architect and an eminent antiquary. If one small grumble be permissible, it is that the grouping of all the notes on each chapter at the end of the chapter is better calculated to enhance the beauty of the printed page than the comfort of the reader, who must be constantly turning forward and back in search of enlightenment among the tall pages and the many plates with which the book is provided.

¹ Mackenzie in *Papers of the British School at Rome*, vi, 136 sqq.

² V. di Cicco in *Not. Scavi*, 1919, 243. See *J.R.S.*, ix, pt. 1.

³ Levi in *Mon. Lincei*, xxvi (1920), 181.

It is doubtless due to the circumstances of publication that the meaningless rendering of Sir W. Fitzwilliam's 'word' *Loyaulat et saprouvera* appears on pp. 72 and 73, when the right reading is clearly shown, *Loyaulate* (for *Loyaulté*) *saprouvera*, on Grimm's drawing on plate 18: also that Grimm's name appears as Grimon at p. 66.

An account of the early history of the manor leads to a description of the foundations excavated on St. Ann's Hill in 1913. These are assigned to the middle of the twelfth century, on such evidence as the few pieces of moulded stonework provided, and belonged to a fortified house standing on the top of an earthen mound. The walled area is an irregular oval, with hall and chapel on the east, and, at the south, a remarkable pear-shaped enclosure which is explained as a shell keep. To this house Cowdray, by a truly ingenious piece of popular etymology, is fabled to have served as a dairy (cow-dairy); a fable satisfactorily disposed of in a note by Mr. Paley Baildon, who shows that la Codray, as it appears on the earliest record, means a hazel wood. There was evidently a house at Cowdray, possibly on the same site as the present house, at the end of the thirteenth century, but the late excavations disclosed no remains of it *in situ*.

The history of the present house begins with Sir David Owen, who married the heiress of the Bohuns about 1488, and before his death in about 1535 had made considerable progress with the building. Sir William Hope attributes to him the eastern range of the quadrangle, including the hall, chapel, great chamber, and kitchen, the northern range and the north end of the western range, up to the great gatehouse, and parts of the kitchen offices in the southern range. The house was completed, and a good deal altered in the process, by Sir William Fitzwilliam, who bought the estate from Sir Henry Owen, son and heir of Sir David, during his father's lifetime. The legal process involved is complicated, and is set forth in detail, this part of the story being also from the pen of Mr. Baildon. Sir Henry does not come well out of the business: Mr. Baildon shrewdly conjectures that he was in financial difficulties, and managed to raise money on the sale of his inheritance without his father's consent. The story is too long to tell, but Fitzwilliam seems to have been in possession by 1530, and in 1533 received licence to crenellate; probably, as Sir William Hope remarks, the latest of such licences to be issued.

Fitzwilliam was made earl of Southampton in 1539, and, dying in 1542, left his Sussex estates to his half-brother Sir Anthony Browne, subject to his widow's interest. But it is clear that Sir Anthony, who died in 1548, two years before Lady Southampton, was in possession of Cowdray from 1545 at least, and to him is due the well-known series of paintings in the great parlour, which were fortunately copied before their destruction by fire, and engraved and published in 1788 by the Society of Antiquaries. For the rest of its history Cowdray remained with the Brownes, created Viscounts Montague in 1554, till the double tragedy of 1793, when the eighth viscount was drowned in the Rhine at Laufenburg, and on

24th September the house was completely destroyed by fire. It remained a neglected ruin for more than a century, receiving no further attention than the periodical pulling down of any parts which seemed specially dangerous, so that the north and south ranges were almost entirely destroyed, and the west range greatly diminished. With the advent of the present owner, however, a new era has begun, and the ruins have been freed from ivy and carefully repaired. The fine series of photographs with which the book is illustrated are supplemented by a set of drawings made by S. H. Grimm between 1781 and 1785, which with Sir W. Hope's coloured ground-plan form as complete a record of the building as can be desired. Whatever may happen to Cowdray in the future, its history at least is secure.

The last section of the book deals with the little priory of Easebourne, a house of Augustinian nuns, probably founded early in the thirteenth century. On such a congenial subject Sir William Hope is at his best, and full of ingenious solutions of the various puzzles which arise. Perhaps the most interesting point is the use of the northern part of the eastern range, adjoining the presbytery of the nuns' church. The space between church and chapter-house is greater than the normal arrangements would require, and the dormitory above is much larger than such a small monastery would need. The suggestion is that the prioress occupied this end of the range, an idea borne out by the provision in Sir David Owen's will for the making of a 'stage quere' or gallery above the old quire, so that the nuns might come to it from their dormitory into the great chamber and thence into the quire 'and nobody to see them'. The route was clearly northward from the dormitory on the first floor, so that the great chamber, doubtless that of the prioress, was between the dormitory and the church.

C. R. PEERS.

The History of St. Bartholomew's Hospital, by NORMAN MOORE, M.D.
London: 1918. C. Arthur Pearson, Ltd. Two volumes. 10 $\frac{7}{8}$ x 8 $\frac{1}{2}$.
Pp. xxii + 614; xiv + 992. £3 3s.

All who are interested in the history of London and of medicine owe a deep debt of gratitude to Sir Norman Moore for the exhaustive account he has written of the institution with which he has been so long associated. Students will look forward to the promised addendum to the history containing a calendar of all the charters of the hospital.

The first volume of the History treats almost wholly of the property of the hospital and its donors from the date of the foundation of the priory and the hospital in 1123, and it is this volume which contains the more valuable part of the work for the topographer and historian of the City. The number of early London charters now for the first time printed is very large, and among them are no less than twenty-four associated with Henry Fitz Ailwin, the first mayor. We have references to most of the early London families, and a point which is brought out is the cosmopolitan character of the City and the quickness with which foreigners became absorbed into the native population; this was notably so with the Italian families of Buccointe (Bucca uncta or oily mouth) and Bukerel

(Bucherelli). The lack of a return for London in the Domesday Book gives added value to these twelfth- and thirteenth-century charters, for as yet we know little of this most critical period of the history of London. It is mainly by the study of land charters such as these that our knowledge on this subject is advanced.

The second volume of the History deals principally with the internal economy and organization of the hospital, and with its reconstitution under Henry VIII in 1544. From this date we have a full account of hospital management, surgery, and medicine as practised at St. Bartholomew's, and biographical notes of all the more famous physicians, surgeons, sisters, and nurses who have served there.

Amongst numerous illustrations are reproductions of the most interesting of the charters. The method adopted by Sir Norman Moore of printing charters partly in the text and partly in notes, sometimes in full and at others in abstract or in fragments, is not ideal for purposes of study. A more convenient form would have been to print the charters together in an appendix.

WILLIAM PAGE.

Chapters in the Administrative History of Mediæval England. The Wardrobe, the Chamber, and the Small Seals. By T. F. TOUT, M.A., F.B.A. Manchester: University Press. 1920. Vols. i and ii. 8 $\frac{7}{8}$ x 5 $\frac{3}{4}$. Pp. xxiv + 317; xvi + 364. £1 16s.

This is the first half of an administrative history of the departments of State most closely connected with the sovereign, and is to extend to the year 1399. The two volumes now issued cover the history of these departments, with the exception of certain subordinate sections, to the death of Edward II. The two volumes to come will complete the period, and will contain in addition studies of the 'Great Wardrobe' and the various 'Privy Wardrobes', and descriptions of the actual seals used so far as impressions of them remain.

The interest of these volumes is therefore more historical than strictly archæological. The subject is somewhat obscure, and as yet very little worked. For the administration of the Wardrobe itself in its full development the main printed authority is still the *Liber Quotidianus* printed by this Society in 1787. The *Collection of Ordinances for the Government of the Royal Household*, similarly printed in 1790, though not containing the earliest ordinances, is still the most accessible and useful collection of such documents. So it is not inappropriate that some space should be devoted here to an account of Professor Tout's book.

The aspect of the Wardrobe, however, which was mainly interesting in past times, was the reflection in its accounts of the everyday life of the king. His clothes, his furniture, his retinue, his jewels were duly noted, and were regarded as evidence of the degree of material civilization to which this country had attained. Professor Tout is in no way concerned with this side of the matter. His design is to show, so far as he can, what place the king and the officers of his household, as distinguished from the more formal institutions of Parliament, the Chancery, and the Exchequer, took in the actual machinery of government. How great a part this was may be deduced from the single

consideration that until Stapeldon's reform of the Exchequer in 1324 a very large part of the national expenditure was administered through the Wardrobe alone. A glance at the Issue Roll of the Exchequer for one of the later years of Edward I will show that the bulk of the money paid out, for whatever purpose employed, was paid out on the Wardrobe account, which consequently occupies something like three-quarters of the whole roll. The king, by writ of Liberate, assigned enormous credits to the keeper of his Wardrobe, who drew on them for all the expenses of the army, navy, and diplomatic service. Even the records required for dealings with other nations were largely in the keeping of the Wardrobe, and we may safely conjecture that the great Registers of Muniments (Books A and B) of the Treasury of the Exchequer were originally Wardrobe Registers and represent the arrangement of the Chests containing the documents copied in them.

Even in the thirteenth century, and still more in the fourteenth, it was impossible for such functions to be performed by an unorganized department, and Professor Tout's book traces the development of the Wardrobe from its beginnings as a personal service to the powerful and complicated engine described in the *Liber Quotidianus*, the school in which were trained the most successful financial administrators of the reigns of Edward I and Edward II. Here also we find the history of successive attempts of the barons to limit or to control the action of the king, as exercised through his Wardrobe and Household. The task is a very difficult one, since the records of the Wardrobe are scattered and imperfect, and evidence has had to be drawn from a wide field.

This is equally true of the history of the 'Chamber', which corresponds in theory with the Privy Purse of the sovereign, but was used at various periods, particularly by Edward III, for financial operations of the greatest national importance. Indeed it might be said that almost all the transactions with Italian financial firms were conducted primarily by the Chamber or the Wardrobe, and only affected the Exchequer through them.

Just as the Wardrobe and Chamber stood in more intimate relation to the king than the Exchequer, the offices of the Privy Seal and the Signet successively intervened between the Chancery and the king. Professor Tout shows that the keeper of the Privy Seal was originally the controller of the Wardrobe, and that the seal was the royal seal for that department. As the Wardrobe gradually acquired a certain independence, a 'secret seal' or Signet took the place of the Privy Seal, and its keeper received the title of secretary, which had at one time been occasionally used for the keeper of the Privy Seal, though probably without the special significance which we now attach to the word. Professor Tout lays considerable emphasis on the failure of a scheme for consolidating the secretariat, which he attributes to Baldock, and which would, had it succeeded, have produced a 'Great Chancery' like that of France, and concentrated the control of Great Seal, Privy Seal, and Signet in a corporation of Chancery officials. It is one of this author's merits that he does not lose sight of the connexion of English and continental practice in matters of administration.

It is impossible to indicate in a review the extent and variety of the

information which is here collected. When the work is complete and provided with an index it will be possible to take full advantage of its contents. A useful feature is the provision of an ample contents-table and a list of the longer notes and of the documents printed. Professor Tout makes one suggestion which seems at least doubtful. He quotes certain payments *pro anulo regis acquietando* and regards them as possibly indicating the use of a signet by Henry III. Is it not equally likely that these payments, which are classed as 'alms', are the ransom of the king's ring offered on the altar in honour of a saint?

C. JOHNSON.

A descriptive account of the Roman pottery made at Ashley Rails, New Forest. By HEYWOOD SUMNER, F.S.A. London, 1919. 8 $\frac{7}{8}$ x 5 $\frac{1}{2}$. Pp. 37, with plans and illustrations. 2s. 6d.

Mr. Sumner is to be congratulated on his account of the Roman pottery made at Ashley Rails, which he has illustrated with many excellent drawings of the types found, thus making it a useful work of reference. It is to be hoped that his example will stimulate other archaeologists in this country to interest themselves in similar undertakings, in order that the dating of pottery in use in the last centuries of the Roman occupation may eventually be established with accuracy.

It is perhaps unfortunate that Mr. Sumner has given Samian numbers to some forms which do not absolutely conform to them, as this may mislead those who are not thoroughly conversant with the dating of Roman pottery. For instance it is inaccurate to say that any of the vessels found are Samian form 29. This number has presumably been given to some of the Ashley Rails examples because of the sharply defined angle in their sides and their moulded feet. But these features are not uncommon in many bowls which could not be termed form 29, one of the principal characteristics of which form is the slightly outbent moulded lip, a feature entirely absent in all the bowls from Ashley Rails to which that number has been given. Form 29 hardly survived into the second century, and the pottery cannot well be earlier than the latter part of the third. The fact, however, that certain of the vessels found do closely conform to Samian types such as 36 and 38 is of much interest. Both of these forms were among the latest made, and that they should have been copied by the Ashley Rails potters helps considerably in the dating of these kilns.

There is a good deal of evidence that stamped ware, somewhat similar in type to that from Ashley Rails, was prevalent on the Continent in the fifth century, and Saxon vessels with decorative motives of this description are well known, but it does not follow that the present finds are of as late a date. The evidence acquired in recent years has established the fact that most of the types found at Ashley Rails were in use in the fourth century or even slightly earlier, but closer dating has not been possible. The coins found bear out this dating, and it is to be hoped that Mr. Sumner will be able to carry on his very useful investigations and in the near future obtain some more definite evidence, which will prove of the greatest value in determining the dates of Roman sites in other parts of the

country. For this New Forest ware was not made only for local markets, but has been found as far away as Wroxeter and Corbridge. Also many of the forms from the Ashley Rails kilns occur in pottery from other factories, and their close dating would be of the utmost importance.

That practically no structural remains were found appears to indicate that the buildings were constructed of wattle and daub, and it is not improbable that, had the mortar and pebble floor been fully uncovered, divisions in it, showing the position of walls, would have been found. It is not clear from Mr. Sunner's account whether any of this mortar and pebble floor was taken up during the excavations. This point is of some importance, as objects found under the floor might prove of great value in giving a clue to the date of its construction and thus furnish valuable evidence as to the period in which the kilns were in use.

J. P. BUSHE-FOX.

Guide to the Collection of Irish Antiquities: Catalogue of Irish gold ornaments in the collection of the Royal Irish Academy. By E. C. R. ARMSTRONG, F.S.A. Dublin: H.M. Stationery Office, 1920. 10 $\frac{3}{8}$ x 7 $\frac{1}{4}$. Pp. 104 with 20 plates. 2s.

A new catalogue of the gold ornaments in the collection of the Royal Irish Academy now housed at the National Museum, Dublin, has been prepared by Mr. Armstrong. It contains an introduction and details of 475 specimens, most of which are illustrated in the text or on the twenty plates, all being drawn half-scale. Sir William Wilde's catalogue was published in 1852, and in the interval registration has become more systematic, and a great effort has been made to rescue from oblivion every detail that might throw light on the date and purpose of these antiquities. The majority belong to the Bronze Age, but the most celebrated hoard (from Broighter or Newtown Linavady, co. Derry) is only about nineteen centuries old, and there are a few Viking pieces. It is now generally agreed that Ireland produced an abundance of gold three to four thousand years ago, and exported typical ornaments to the adjacent parts of Europe; but there is wide scope for conjecture and debate with regard to the nature and sequence of whole groups of specimens. The best-known form, the *lunula* or lunette, is a case in point; and though the chain found on one in Dépt. Manche supports the view adopted by the author that they were collars, it is difficult to explain why these crescents, which must have been uncomfortable and even dangerous to wear, are ornamented only towards the points, and left plain (except for narrow borders) on the broadest part forming the front. A wooden case, evidently made for one of these ornaments, has been found in co. Cavan; and a wooden box has come to light in co. Tyrone containing a still more mysterious object. A bar bent into a semicircle and terminating in two hollow cones is a type frequently found in Ireland, and has received the unfortunate name of *fibula*, on the assumption that it was used as a brooch to fasten the dress. Wilde remarked that the head of the cones showed the most wear owing to the friction of the pin; but no pin has ever been found in association with these objects, and occasionally engraving is found at

that very point. Further, the inside of the cones is sometimes ornamented and evidently meant to be seen, whereas the handle is plain, as if intended to be covered in use. Pending a complete explanation, the term 'grip' might be adopted as non-committal, and the type may prove to be related to the oath-rings (*Schwurringe*) common in northern Europe about the same date. Another problem is presented by the *bullae* which curiously resemble the Etruscan pattern adopted in classical Italy by the boys of noble and wealthy families. At present no intermediate link can be found, and the date remains uncertain. Such questions as these have been brought nearer solution by Mr. Armstrong's carefully collected evidence as to the circumstances of discovery; and this Guide will no doubt stimulate the ingenuity of Irish and other archaeologists. In conclusion attention may be drawn to the very remarkable find at Lattoo, co. Cavan, in 1919, first published in *Man*, June 1920, no. 45. About 11 ft. deep in a bog lay two 'grips' with conical ends and two bracelets, together with an elaborately engraved disc 4.8 in. across, all being of gold. Previous discoveries in Ireland and elsewhere support the view that the disc was originally a sun-symbol, perhaps mounted on a model car like that of Trundholm Moss in Denmark. This single hoard therefore confirms the dates assigned to three definite gold types on other and independent grounds; and its inclusion in the Catalogue at the last moment is a matter for congratulation.

REGINALD A. SMITH.

Periodical Literature

Archaeological Journal, vol. 63: Sir Henry Howarth analyses in detail the Chronicle usually attributed to Florence, and gives reasons for assigning its compilation to John rather than to Florence of Worcester. Professor Baldwin Brown has an article on the Anglo-Saxon as an artist, Mr. Du Boulay Hill describes the pre-Norman churches and sepulchral remains of Nottinghamshire, and Mr. Bothamley contributes a careful account, with plans and other illustrations, of the walled town of Aigues-Mortes. There are also papers by Lord Dillon suggesting a Tyrolese origin for the effigy of Richard Beauchamp at Warwick, by Mr. Fryer on the effigy of Bridget, countess of Bedford, at Chenies, and by Mr. Ellis on an antique silver brooch inscribed in twelfth-century Norman French.

Journal of the British Archaeological Association, N.S., vol. 25, contains a copiously illustrated account of the churches of Great Rollright, Hook Norton, and Wigginton, Oxon., by the President of the Association, a paper on the Medieval Bestiaries and their influence on English decorative art by Mr. G. C. Druce, and various papers on Colchester read in connexion with the Association's Annual Meeting. There are also papers by Mr. W. A. Cater identifying St. Mary Newchurch with St. Mary-le-Bow, and by Mr. T. F. Tickner on the cathedral and priory of St. Mary of Coventry, in which is reproduced a plan showing a most unusual arrangement of the cloister which can only be based on a misreading of the evidence.

Journal of Roman Studies, vol. 8: Sir William Ramsay contributes the second portion of his studies in the Roman province of Galatia, dealing with dedications at the sanctuary of Colonia Caesarea. Mr. J. G. Milne writes on the shops of the Roman mint of Alexandria, and Mr. A. H. Smith describes the portrait relief of L. Ampudius Philomusus and his wife and daughter, recently acquired under peculiar circumstances for the British Museum. There is also a full bibliography of the works of the late Professor Haverfield by Dr. George Macdonald.

Numismatic Chronicle, vol. 20, pt. 2, contains two papers by Mr. G. F. Hill, one describing the Greek coins acquired by the British Museum, mainly from the Weber collection, in 1919, and the other on a hoard of coins of Eadgar, Eadward II, and Aethelred II found at Chester. M. de Morgan contributes an essay on the Semitic inscriptions on Characenean coins, and Mr. S. W. Grose gives a short account of the collection of Greek coins bequeathed to Balliol College by Dr. Strachan-Davidson.

Transactions of the St. Paul's Ecclesiological Society, vol. 8, pt. 4, contains an interesting inventory of the goods at Pleshy College by the late Sir William Hope and Mr. Atchley, a paper by Dr. Norman on St. Mary Aldermary and St. Mildred, Bread Street, and a transcript by Mr. Craib of the inventory in the Public Record Office of Church Plate received in the Jewel House in the Tower of London in the reign of Edward VI.

Berks, Bucks, and Oxon Archaeological Journal, vol. 25, no. 2, continues an account of certain churches, Sutton Courtenay and Abingdon Abbey, and a survey of Wallingford in 1550, and contains a paper by the late Lt.-Col. Wheelton Hind of Stoke-on-Trent on the approximate dates of Wayland Smith's Cave and the White Horse of Berkshire. He rightly considered the monument as the chamber of a long barrow dating from neolithic times, but should not have used the term 'dolmen' in this connexion. Wayland's Smithy lies north and south, most of the chambered barrows being on the contrary east and west, so that it is difficult to follow his argument that 'from the careful way in which these ancient tombs were oriented, sun worship must have been in vogue'. The connexion with Wayland could only date, as he pointed out, from pagan Anglo-Saxon times, many centuries after the tomb was in use; and there is reason for thinking that the stones were exposed at the time the name was given much as they are now, the long barrow having been denuded.

Transactions of the Bristol and Gloucestershire Archaeological Society, vol. 41, contains continuations of Dr. Fryer's paper on Gloucestershire Fonts and of Mr. Walters's on Gloucestershire Bell Foundries, the Bristol foundry being dealt with in this volume. Mr. St. Clair Baddeley contributes papers on Norman and Medieval Gloucester, Mr. C. E. Keyser has a profusely illustrated account of six churches in the neighbourhood of Cirencester, and Mr. Bartlett contributes a paper on the discovery of the chapel of St. Blaise at Henbury. In addition Canon Wilson prints from the Worcester *Liber Albus* correspondence between the abbot of St. Augustine's, Bristol, and the prior of Worcester in 1311, and Colonel Buckton a transcription of the North Nibley Tithe Terrier.

Transactions of the Cumberland and Westmorland Antiquarian and Archaeological Society, vol. 20: the late Professor Haverfield contributed a paper on the provisioning of Roman forts and another on Old Carlisle; Mr. P. Ross continues his studies of Roman roads, describing that between Low Borrow Bridge and Brougham Castle, and a note by the late Canon Rawnsley records the rediscovery of a small Roman altar (*C. I. L.* vii, 938). Mr. T. H. B. Graham has four papers, on Carlatton, on the manors of Melmerby and Ainstable, and a further part of his study of the Eastern Fells. Mr. W. G. Collingwood writes on the cross at Penrith, known as the Giant's Thumb, and the number also contains communications on Walney Chapel, on Cartmel Priory, on papers from Bardsea Hall, on the Glaisters of Cumberland, and a calendar of documents belonging to Mr. Burrow of Crosthwaite.

Journal of the Derbyshire Archaeological Society, vol. 42, contains papers by Mr. H. Kirke on Sir Henry Vernon of Haddon, who died in 1515, based on records in the Belvoir muniment room; by Rev. H. Lawrance on the Heraldry of Dugdale's Visitation of Derbyshire 1662-3; on the south court of Codnor Castle, with plan and other illustrations, by Mr. W. Stevenson, and the concluding part of Mr. S. O. Addy's study on House-burial, with examples in Derbyshire.

Transactions of the Essex Archaeological Society, N.S., vol. 15, contains an account by Major Mortimer Wheeler of the excavation of the Balkerne gate at Colchester, undertaken on behalf of the Morant Club. The plan of the gate appears to be unique in Britain, but parallels can be found on the Continent at Autun, Turin, and Nîmes. Mr. Miller Christy contributes a detailed account of the eighteen Roman roads in the county with a full bibliography, and there is also a paper on the forest of Blackley, and the first of a series of articles on ancient stained glass in Essex.

Transactions of the East Herts. Archaeological Society, vol. 6, pt. 2, contains a description, with plan, of the church of St. Mary, North Mimms, by Mr. H. G. Spary; a record of the expenses of the household of John, king of France, during his captivity in Hertford castle, by Mr. H. C. Andrews; an account of the descent of the manor of Roxford, by Mr. W. F. Andrews, and a description of the Holwell parish registers by Mr. H. F. Hatch.

Transactions of the London and Middlesex Archaeological Society, N.S. 4, contains papers by Sir Edward Brabrook, Mr. A. Bonner, and Mr. P. M. Johnston on Staple Inn; another paper by Mr. Bonner on St. George's in the East and the Minorics, and the concluding portion of Dr. Martin's paper on early maps of London.

Proceedings of the Somersetshire Archaeological Society, vol. 65, contains a paper by Sir Henry Maxwell Lyte relating the devolution of the property of Serlo de Burci and outlining the descent of the baronial family of Martin. Mr. H. Symonds publishes a transcript of documents showing the manner in which the great Civil War affected the inhabitants of the country round Brent Knoll. Mr. Bligh Bond publishes the ninth report of his excavations at Glastonbury Abbey, describing the discovery of the supposed Loretto chapel, Dr. Fryer continues his description of Somerset monumental effigies, and

Dr. Hensleigh Walter reports the discovery of Roman buildings, pottery, etc., at 'Stanchester' in the parish of Stoke-sub-Hamdon.

Historical Collections for Staffordshire, vol. for 1919 issued by the William Salt Society, contains a full paper on the early history of the parish of Blithfield, with an account of the parish church, by Rev. D. S. Murray, and a communication by Messrs. Bridgeman and Mander on the Staffordshire hidation. There is also published in this volume a transcript of a note-book of Gregory King, Lancaster herald (died 1712), the MS. of which is now in the William Salt Library.

Proceedings of the Suffolk Institute of Archaeology, vol. 17, contains a paper by Miss Layard on flint tools showing well-defined finger-grips; a description of the fine seven-sacrament font at Monk's Soham, and a transcription and annotation by the late Sir William Hope of the inventories of the college of Stoke-by-Clare taken in 1534 and 1547-8.

Yorkshire Archaeological Journal, vol. 25, pt. 3: Mr. W. M. P'Anson describes the church and conventual buildings of Coverham abbey, illustrated with a plan, and there is also a description, with a plan, of Crambe church in the North Riding by Mr. G. E. Kirk. Other papers include one by Mr. H. F. Killick on the memoirs of Sir Marmaduke Rawden, a Royalist knight who defended Basing and Faringdon and died in 1646; by Mr. C. J. Battersby on the word 'Anima' in Elizabethan English, showing that it meant a breastplate, cuirass, or coat of mail; a study by Mr. W. Hornsby of the Domesday 'valets' of the Langbargh wapentake, suggesting a rule for their computation; and notes on the discovery of a Roman tower at York and on a medieval entrenchment between Gargrave and Skipton.

Société Jersiaise 15th Annual Bulletin, contains a description of Le Couperon dolmen, Rozel, recently transferred to the Society; a note on the discovery of a neolithic kitchen-midden on the Icho Tower islet, and another note recording the finding of a fine flint implement in the St. Laurence valley. The number also contains a paper by Mr. Nicolle on the occupation of Jersey by the counts of Maulevrier from 1461 to 1468, and a description of St. Mary's church by Colonel Warton.

Archæologia Cambrensis, 6th ser., vol. 20, contains a further instalment of Mr. Harold Hughes's paper on Early Christian decorative art in Anglesey; Mr. O. G. S. Crawford's account of his excavations at Hengwm, Merionethshire, the sites explored being three stone circles of the Bronze Age, a hitherto undiscovered promontory fort, and the hill-top fortress of Pen Dinas, of the Iron Age probably anterior to the Roman occupation; and papers on Scandinavian influence on Glamorgan place-names; on a smelting floor at Penrhos Lligwy, Anglesey; 'Stedworlango', a study of the fee of Penmaen in Gower; on St. Paulinus of Wales, and on the people and speech of Gowerland. The discovery of an inscribed stone of the early sixth century from Llan-sadyrnin, Carmarthenshire, is also recorded.

Transactions of the Honourable Society of Cymmrodorion (1918-19): Mr. Hadrian Allcroft contributes a paper on the Celtic Circle-Moot, in which he argues that the stone circle without a ditch was not in origin sepulchral, but was a place of assembly. In the same volume Professor Tyrrell-Green has a long paper on types of baptismal fonts

as illustrated by Welsh examples, and Professor J. E. Lloyd writes upon the family and early history of Owain Glyn Dŵr.

Journal of the Flintshire Historical Society for 1919-20 contains papers on Gwaenysgor church, by Mr. A. W. Beer, on the plate at Hawarden church, by Rev. W. F. J. Timbrell, and a translation by Mr. W. B. Jones of certain Hawarden deeds, being portions of the Moore deeds belonging to the Liverpool corporation. There is also a long paper by Mr. Edward Owen on the monastery of Basingwerk at the period of its dissolution, consisting of a collection of documents from the Public Record Office.

Journal of the Royal Society of Antiquaries of Ireland, vol. 49, pt. 2; Mr. E. C. R. Armstrong describes the bell shrine of St. Seanan, known as the Clogan Oir, recently sold at Christies and presented to the collections of the Royal Irish Academy. Mr. Westropp continues his studies of Irish forts, describing several in Dunkellin and other parts of southern Galway. Mr. H. S. Crawford contributes some notes on the Book of Kells and a paper on a late slab and cross at Taghmaconnell, co. Roscommon, and there are also papers on the family of De Lacy in Ireland, on Donnybrook, and on the chalices belonging to the West Convent, Galway.

Papers of the British School at Rome, vol. 9: Mr. G. F. Hill contributes a paper on Roman medallists of the Renaissance to the time of Leo X; Dr. Ashby writes on the Palazzo Odescalchi; Mr. R. Gardner on the Via Claudia Valeria; another paper by Dr. Ashby is entitled 'Antiquae statuæ urbis romanæ', and Mgr. Mann deals with the Portraits of the Popes. Mrs. Arthur Strong publishes a sepulchral relief of a priest of Bellona and a bronze plaque with bust of Aristotle in the Rosenheim collection, while Mr. H. C. Bradshaw contributes a study for the restoration of Praeneste.

Mémoires de l'Académie royale de Belgique, 1920, and *L'Atlantide*, 1920: M. Rutot has recently published two lectures in support of the theory propounded in 1883 by Prof. Berlioux, of Lyon, with regard to the lost Atlantis. The contention is that the island ceased to exist, not through sinking in the ocean, but by being joined to the continent of Africa by an upheaval in historical times. It is identified as Morocco, Algeria, and Tunis, with its capital Cerne somewhere east of Agadir on the river Sus, between the Atlas and Anti-Atlas ranges. From the river Draa on the west to the Lesser Syrtis on the east there was apparently a chain of rivers and lakes only interrupted about the eleventh century B.C. by a vast earth-movement that ruined the climate and put an end to one of the great civilizations of history. According to Plato the disaster in Atlantis coincided with great floods in Greece, perhaps the deluge of Deucalion; but the epoch indicated for Atlantis in its glory is not 8,000 years before Solon (about 600 B.C.) but rather eight centuries before his time, an error of some magnitude in the story told by the Egyptian priest to the Athenian statesman. The first mention of Atlantis is in Herodotus, iv, 184-5, but from his words no one would suspect that the country had had a glorious past. About 1200 B.C. the capital was destroyed by the Amazons, and to Herodotus in the fifth century the Pillars of Hercules represented the ends of the earth. According to

the dead were consumed by fire, and over their ashes were raised standing stones (*Bautastenar*). But after Frey was buried under the cairn at (Gamla) Upsala, many chiefs raised cairns as commonly as stones to the memory of their relations. The age of cairns began properly in Denmark after Dan Mikillate had raised for himself a burial cairn, and ordered that he should be buried in it at his death with his royal ornaments and armour, his horse and saddle furniture and other valuable goods; and many of his descendants followed his example. But the burning of the dead continued long after that time to be the custom of the Swedes and Northmen.' It may well be that cremation was the commonest burial rite in Norway and Sweden down to the introduction of Christianity; and the rule applies only to the western half of Denmark, where barrows were raised over the unburnt dead from the ninth century. Perhaps the change was due to news of the elaborate burial arranged for himself at Aix-la-Chapelle by Charlemagne in 814. But Snorre's classification is vitiated by the fact that cremation and barrow-burial are not mutually exclusive, and there are other objections. Nothing is said about the ship-burials of Norway; but standing-stones are known to be very scarce in that country, comparatively numerous in Denmark, and nowhere so common as in Uppland, the richest centre in the Viking period. The change of rite was no doubt due to an altered conception of life beyond the grave, and it is curious that a converse change took place in north-west Europe about 1000 B.C., when the Bronze Age population began to burn their dead after many centuries of inhumation. The paper is a long one, and will prove a useful commentary on the elaborate funerals described in the Sagas. Another contribution of interest consists of notes by Adolf Noreen on the ancient tribal names of northern Europe; and an early form of the Swedish name is said to have the same meaning as Sinn Fein.

Obituary Notices

Robert Munro, I.L.D.—By the death of Dr. Robert Munro, which took place at his residence, Elmbank, Largs, on 18th July 1920, a notable figure in archaeology has passed away. He was born in Ross-shire on 21st July 1835, and was thus in his eighty-fifth year. His early education was obtained at Tain Royal Academy, whence he proceeded to the University of Edinburgh and took his M.A. degree. To qualify for his intended profession he entered the School of Medicine there and had the benefit of instruction in anatomy from Professor, afterwards Principal, Turner, with whom in later years he formed a close friendship. After taking his medical degree he settled down in a practice in Kilmarnock, and for a space of about twenty years led the life of a busy and successful country practitioner. When in 1877 the Ayrshire and Galloway Archaeological Society was formed Dr. Munro became one of the original members, and having previously had his attention arrested when on the Continent by the display of

relics from the Swiss lake dwellings, responded readily to an invitation to help in the excavation of Crannogs in Ayrshire undertaken by that Society under the leadership of Mr. Cochran Patrick. His zeal grew with the widening of the field of exploration, and in time Munro became the leader of the enterprise and in 1882 published the results of his researches in the volume entitled *Scottish Lake Dwellings*.

A few years later his resources were such as to free him from his arduous professional labours, and with his interest steadily fixed on the aspect of the subject which had primarily attracted him, he retired from his practice and devoted himself henceforth entirely to archæology. To make himself conversant with continental analogies he indulged his taste for travel, and in 1888, on the invitation of the Society of Antiquaries of Scotland, he delivered a course of Rhind Lectures, taking as his subject *The Lake Dwellings of Europe*. These lectures, illustrated by the skilful draughtsmanship of his wife, were published in book form in 1890, and appeared in a French edition in 1908. The merit of the volume was quickly recognized and gave to its author a wide reputation. As a result of frequent visits to the Continent, invariably with some archæological quest as his object, various papers dealing with prehistoric remains abroad were contributed by him to the *Proceedings of the Society of Antiquaries of Scotland*, of which Society he was one of the honorary secretaries from 1886 to 1899. The account of a visit to the shores of the Adriatic was published in book form in 1895 under the title of *Rambles and Studies in Bosnia-Herzegovina and Dalmatia*. Two years later he published a volume entitled *Prehistoric Problems*, which showed the drift of his mind from the researches on lake dwellings to the scientific study of primitive man, induced by his early training in anatomy. This was followed in 1899 by *Prehistoric Scotland and its place in European Civilization*, being a general introduction to a series of county histories of Scotland. Other works which he produced were *Archæology and False Antiquities* (1905), *Palæolithic Man and Terramara Settlements* (1912), and *Prehistoric Britain* (1914), and numerous contributions to learned societies.

He took a keen interest in the Anthropological section of the British Association, of which section he was president in 1893, and in 1903 he delivered an address at the meeting of the Association at Southport. In 1894 he was appointed Chairman of the Committee charged with the conduct of the excavations on the site of the Glastonbury lake dwellings, and on the completion of that work continued his chairmanship when the Committee undertook the excavation at Meare. His absorbing interest in archæology induced him to endow an annual course of lectures in Edinburgh University on Anthropology and Prehistoric Archæology, and in 1910, at the age of seventy-five, he himself delivered the first course. With continuing vigour, in the following year he delivered the Dalrymple Lectures in Archæology in the University of Glasgow, the matter of both courses being embodied in his *Palæolithic Man and Terramara Settlements*. Both the Universities of Edinburgh and Glasgow conferred upon him the honorary degree of LL.D.

A man of tall stature, with an erect carriage and a powerful frame,

he was conspicuous by his somewhat rugged features, his bushy eyebrows, and dark piercing eyes. He was a sturdy antagonist in argument and was loath to leave a controversy even though the point at issue had ceased to arouse interest. His friends will long remember how he loved to draw from its hiding and worry afresh the subject of certain structures excavated on the Clyde which produced contentious relics. In his home in Edinburgh, assisted by his wife, he was never happier than in the entertainment of any noted savant visiting the city, and in the gathering of his friends, old and young, to meet him. Though never a Fellow of our Society, he acted as one of the local secretaries for Scotland from 1901-13.

As an archaeologist Munro was eminently sane and reliable, and his methods, due no doubt to his professional training, thoroughly scientific. To his other qualities may be added an absorbing enthusiasm and a sense of good fellowship by which he will be kindly thought on by those who enjoyed the privilege of his friendship.

A. O. C.

George Payne, F.S.A..—Kentish archaeology has suffered a severe loss in the death of Mr. George Payne, which occurred on 29th September. His first notable archaeological work was the excavation in 1872 of the Roman remains at Milton-next-Sittingbourne. Many other discoveries of both Roman and Saxon remains followed at other sites in the neighbourhood and the results were published in his *Collectanea Cantiana*, while the objects discovered have found a permanent home in the British and Maidstone Museums. Another important excavation carried out by him was that of the Roman villa at Dartford. His great work, however, was the foundation of the Eastgate-House Museum at Rochester, into which he threw himself with characteristic energy, and this museum will be a lasting memorial of his enthusiasm and knowledge. He was elected a Fellow of the Society of Antiquaries in 1880.

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The Discovery of Engravings upon Flint Crust at Grime's Graves, Norfolk

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[Read 27th January 1921]

EXCAVATIONS at Grime's Graves, Norfolk, during September 1920, revealed a new chipping site (Floor 85), and resulted in the discovery thereon of two pieces of engraved flint crust, associated with a series of flint implements of Le Moustier type, bone tools, and pottery, upon a living level immediately overlying glacial sand.

As only one engraving has previously been found upon an actual prehistoric site in Britain, viz. the well-known horse's head on bone from Creswell Crags, Derbyshire, the importance of this find will be appreciated. Incidentally it affords valuable evidence in favour of an early date for the beginning of the Grime's Graves industry.

The new floor is situated near the south-east margin of the mining area, immediately west of the Tumulus Pit. An area of 36 square yards was excavated, to a depth of 3 ft., but the superficial limit of the floor was not reached. Over the whole area examined two distinct occupation levels existed, each including large hearths with quantities of charcoal, pot boilers, and the usual solidly compacted mass of flakes, fine chippings, blocks of raw material, and implements more or less perfect, which characterizes these floors.

On the northern margin of the excavated area a third occupation level was discovered, extending over an area of 20 square feet, consisting of a layer of black humus up to 6 in. in thickness, mixed with charcoal and quantities of animal bones split

and broken. This layer—which has not been fully worked out—contained a hearth upon which were a pair of bronze tweezers and fragments of coarse pottery, since identified as of the Bronze Age. Two bone tools were also found. From the humus immediately beneath the turf was taken, at separate points, a piece of black pottery described as probably of the Early Iron Age, a fragment of grey Romano-British ware, and a sherd of provincial red Samian ware.

The Bronze Age level will be referred to as Floor 85 A, the intermediate floor as 85 B, and the lowest floor as 85 C. Floor 85 A rested at 12 in. under the surface level upon sandy chalk rubble; probably spoil from the pit on the west. This sandy rubble was from 6 in. to 8 in. thick and covered Floor 85 B, separating it from 85 A. The underside of Floor 85 B was 1 ft. 9 in. below the surface. Floor 85 C was separated from 85 B by a compact mass of chalk rubble, sandy in places, and 7 in. to 9 in. thick, which enclosed the upper flakes of the lower floor. The floor itself (85 C) was 3 in. to 5 in. thick, and rested upon, and was partly embedded in, the red sand, which is decalcified boulder clay, and forms the undisturbed subsoil at a depth of 2 ft. 9 in. to 3 ft. below ground level. It was upon Floor 85 C that I discovered the pieces of engraved crust here figured.

The first, and most important, was embedded about 2 in. deep in the red sand. It is executed upon a rough untrimmed outer flake of floorstone, consisting almost entirely of the thick brown crust of the flint. The engraving is a naturalistic representation of a stag or perhaps an elk, certainly one of the *Cervidae*, disturbed whilst browsing on rough ground, amidst long herbage. The head is held erect and three stalks of grass are hanging from the mouth. The right foreleg is raised and partly covered by the herbage. The left foreleg is on the ground, buried in herbage, as are both the hind legs. The shaggy hair clothing the breast is indicated by a series of fine engraved lines. The antlers are only indifferently drawn, a fault common to similar engravings from the Dordogne caves. The short stumpy tail is suggested by three skilful touches. Rough ground or rocks are indicated in the foreground between the hind and forelegs by three lines deeply incised. The flake measures 3.2 in. by 1.6 in. Practically the whole surface is occupied by the engraving. The surface is slightly convex.

Flint crust of this nature, though softer than flint, is exceedingly hard. The piece under notice will scratch glass. Consequently considerable skill in engraving must have been necessary to produce a drawing, on such hard material, having the quality and truth of

line exhibited in this example. The difficulties of the artist are shown in his somewhat uncertain rendering of the head and raised foreleg when compared with the hind-quarters and body. This slight uncertainty of line in drawings upon flint and stone is noticeable upon numerous continental examples figured by M. Salomon Reinach in his *L'Art Quaternaire*. The engraving is executed in incised outline, sharp though not deep ; the deepest being the antlers and the shallowest the head.

The second example occurred in the upper layer of Floor 85 c,



Engravings on flint crust from Grime's Graves.

partly in contact with overlying chalk rubble, 4 ft. distant from the stag engraving. It also is executed upon crust, in this instance forming the back of a curved angle flake-knife—5.1 in. long, extreme width 0.8 in.—having a battered edge and a faceted butt. The engraving is of varied character, the most important consisting of an animal's head, perhaps a hind. The ear, throat, and neck are boldly incised ; the remainder, which would require more careful drawing and a steadier hand, is in shallower engraving. A mane and long hair under the jaw are well defined. An oblique line from the jaw upwards to the right probably represents an impaling arrow or lance. To the left of the head is a vertical line, and running into it a bold sweep terminating in a sharp curve

and returned angle. Above this is a V-shaped form laid horizontally. All these lines are deeply incised. To the right of the head is a group of apparently formless lines similar in character to those upon pieces of crust noticed in previous excavations on other floors, to which Dr. A. E. Peake called attention in 1916. Several specimens of this sort were obtained from Floor 85 c in addition to the drawings under notice.

The engravings were associated with several important implements of flint, notably a proto-celt, or double *racloir* of Le Moustier type, $7\frac{1}{2}$ in. long and $3\frac{1}{4}$ in. in extreme width. It is a flake implement struck from a tortoise core, the bulb being afterwards partly trimmed away and the edges carefully worked with secondary chipping on the upper face only. This was taken from a pocket in the red sand beneath Floor 85 c, together with a smaller implement of similar type and a large *racloir* worked out of brown crust. Eighteen inches distant, in the upper layer of Floor 85 c, in contact with chalk, was a large ovate hand-axe of Drift form, 7.1 in. by 4.3 in., also five *racloirs*, numerous *dos rabattu* knives, a small Le Moustier point, and a large *poinçon*. In the same pocket as the proto-celt were several fragments of pottery forming portions of the base and side of a vase. This pottery is identical with that discovered in the pits excavated in 1914 and upon various floors since. One foot distant from the pocket, and lying in the sand, was an implement formed of a deer antler tine, perforated for suspension at the thick end, and rubbed down at the point. Another example, but unperforated, was found a few inches distant from the stag engraving; and 3 ft. therefrom, also in red sand, a bone piercing tool 4.9 in. long, worked from a fragment of a long bone rubbed down and polished.

After writing the foregoing I received from Dr. A. E. Peake a series of engraved crusted pieces found by him on various floors at Grime's Graves between 1916 and 1920. In most cases the engraving is of the apparently formless variety already referred to. Two pieces are, however, worthy of special attention in view of the more elaborate drawings already described.

The first of these was found in September last upon Floor 75, and bears a representation of an animal's head very deeply engraved, also what may be a leg, foot, and two arms of a human figure. Examples from French sites show that the human figure is very rarely well drawn, and several examples might be cited that are no more faithfully rendered than this.

The second example, in addition to several curved lines and combinations of lines, has upon it a well-drawn animal's head; also, at one corner of the piece, engraved lines suggesting the

nose and one long ear of an animal ; the eye being supplied by a natural scar left upon the nodule by the falling away of a spicule during its formation.

The practice of engraving animals upon stone and bone in a naturalistic manner, generally accepted as a characteristic and exclusive feature of the late Palaeolithic period, also the similarity in form and workmanship of the flint implements associated with the engraved pieces just described, with recognized Le Moustier types, seem to show that Grime's Graves were in occupation by Le Moustier man, and that the site has been in continuous, or at all events successive, occupation down to the close of the Bronze Age.

I was associated in these excavations with Mr. B. W. J. Kent, F.S.A.(Scot.), and assisted on several occasions by Mr. J. B. Sidebotham, both of whom were present when the engraved pieces were discovered.

DISCUSSION

Mr. REGINALD SMITH was prompted to congratulate Mr. Armstrong, not so much on his good fortune in making a discovery of supreme interest as on the care he must have exercised in scrutinizing every piece of flint brought to light during excavations made for that very purpose. He had already done excellent service at Grime's Graves in planning the whole series of pits for the Prehistoric Society of East Anglia, and was at last rewarded for his manual labour in investigating the floors. The flints exhibited by the author and Dr. Peake represented a vast harvest, and were sufficient to give an idea of the industry concerned, on which the engraved stones were destined to throw a very welcome light. Authorities at the Natural History Museum regarded the more complete animal as an elk (*Alces machlis*, known in America as the moose), and stated that the species went back as far as the Forest-bed of Cromer, at the base of the Pleistocene. But whatever its artistic merits, the engraving was not a portrait, and there might be a difference of opinion as to the animal represented. The long legs and short body were in favour of the elk, but it was difficult to believe that the massive palmated antlers of that animal escaped the notice of the artist, who had produced something more like those of a red deer. The length of limb, combined with a short neck, compelled the elk to kneel in order to browse on grass ; and the bent foreleg might indicate that action. As in the famous Thayingen engraving of a reindeer grazing, the hoof was realistically hidden by herbage. The discovery of two undoubted animal figures gave additional significance to the chalk carvings in the round found at the Graves, as well as to the scratches on various pieces of flint-crust exhibited by Dr. A. E. Peake. Those, like Mr. Armstrong's specimens, had been traced in white water-colour for purposes of exhibition and photography, but the original condition could be restored at will.

Besides the Creswell Crags¹ and Sherborne engravings,² the figure of a goat had been detected by Mr. Lewis Abbott on a pebble from Nayland, Suffolk, in the collection of Rev. J. D. Gray, by whose permission it was exhibited to the meeting. Illustrations of it were published in *Journ. Suffolk Institute of Archaeology*, xv (1913), p. 3, and the *Sphere* of 31st January 1914, p. 132.

Rev. H. G. O. KENDALL was not convinced that the engraving dated from the palaeolithic period, the evidence to the contrary being in his opinion overwhelming; and he would have liked to discuss the flints exhibited. There was a prevalent idea that several cultures extending over a long period were represented at Grime's Graves, but that was not supported by evidence. The period of mining there was a short one, and the few phases of culture covered a limited period: thus the celts were not far removed in time from the side-scrapers, and his own excavations last summer showed them side by side. With the aid of his daughter, he had identified some diminutive worked flakes as arrow-heads. Several scratched specimens in his collection had straight lines parallel for three inches, but one had a short line with a single barb, and another bore a V-shaped mark. He interpreted some of the lines on specimens exhibited by Dr. Peake as arrows, and inquired if the pottery found at the lowest level had been submitted to experts.

Mr. DALE had followed with interest the correlation of the newly discovered works of art with similar productions of palaeolithic man, and recalled the exhibition of the Creswell Crags horse at the Geological Society in 1875. The associated series of mammals exhibited on that occasion belonged to the palaeolithic fauna. The Grime's Graves flints on the table had converted him to the view that the industry they represented was not neolithic.

The PRESIDENT warmly congratulated Mr. Armstrong on a discovery which was no less than wonderful whatever its date might prove to be; and the Society was fortunate in being the first to discuss it. Rude as it was in some respects, the art of the engravings seemed of the same character as the French Cave series, though he would not say that the resemblance was conclusive. In recent years discoveries at Grime's Graves, Northfleet, and elsewhere had reduced the sequence of prehistoric periods to a state of flux. If type, material, and coloration, singly or collectively, meant nothing at all, the whole structure of prehistoric study was undermined. In any case the Grime's Graves industry did not seem to belong to the ordinary neolithic period. The polishing of stone implements had generally been attributed to later ages, but palaeolithic man of the Cave period habitually polished other materials, and there was no reason why he should not have treated flint in the same manner. It was therefore erroneous to speak of the age of polished stone.

¹ Evans, *Stone Implements*, 2nd ed., fig. 413 F; Brit. Mus. *Stone Age Guide*, 2nd ed., fig. 75.

² *Quart. Journ. Geol. Soc.*, lxx (1914), 100.

Excavations at Frilford

By L. H. DUDLEY BUXTON, M.A.

[Read 2nd December 1920]

History of the Site. Excavations were carried out on the site by Mr. Akerman in 1864 and 1865 and in the two following years and by Dr. Rolleston, then Professor of Anatomy and Physiology, at various times between 1864 and 1868. The results of the excavations were embodied in papers published by this Society.¹ He appears principally to have assisted at quarrying operations which were then in progress, but also to have searched one or two other small areas. No map of his excavation is extant, and according to his assistant William Hine, who is still alive, no map appears to have been made. The areas probably excavated by him are marked with a cross on figure 1.

Since that time a number of graves have fallen into the quarry, and scattered finds appear to have been made from time to time, some of which were examined by Professor Rolleston and after his death by Professor Moseley.

In the spring of 1920 an undergraduate society, the Oxford University Archaeological Society, was anxious to do some excavating and asked me to find a site and direct the work. By kind permission of Mr. Aldworth, the owner of the property, we were able to start at Frilford in the middle of the Hilary Term, and spent week-ends there during Term, and four days at the ends of both the Hilary and Trinity Terms. The labour was provided chiefly by junior but also by senior members of the University, and honorary members of the Society, especially Sir Arthur Evans, Mr. Balfour, and Mr. Leeds materially assisted the excavations by advice and personal visits. Mr. Leeds has helped me very much in the preparation of this paper. I am indebted to Professor Arthur Thomson both for his keen interest in the work and also for putting the resources of the Anatomical Department at my disposal.

Position. The site is situated about a hundred yards to the west of the Oxford-Wantage road and almost opposite the eighth milestone from Oxford (see fig. 1). It lies on the sloping ground above the river Ock. A Roman villa about half a mile to the

¹ *Proc. Soc. Ant.*, 2nd Ser., iii, 136; *Archaeologia*, xlii, 417; xlv, 405.

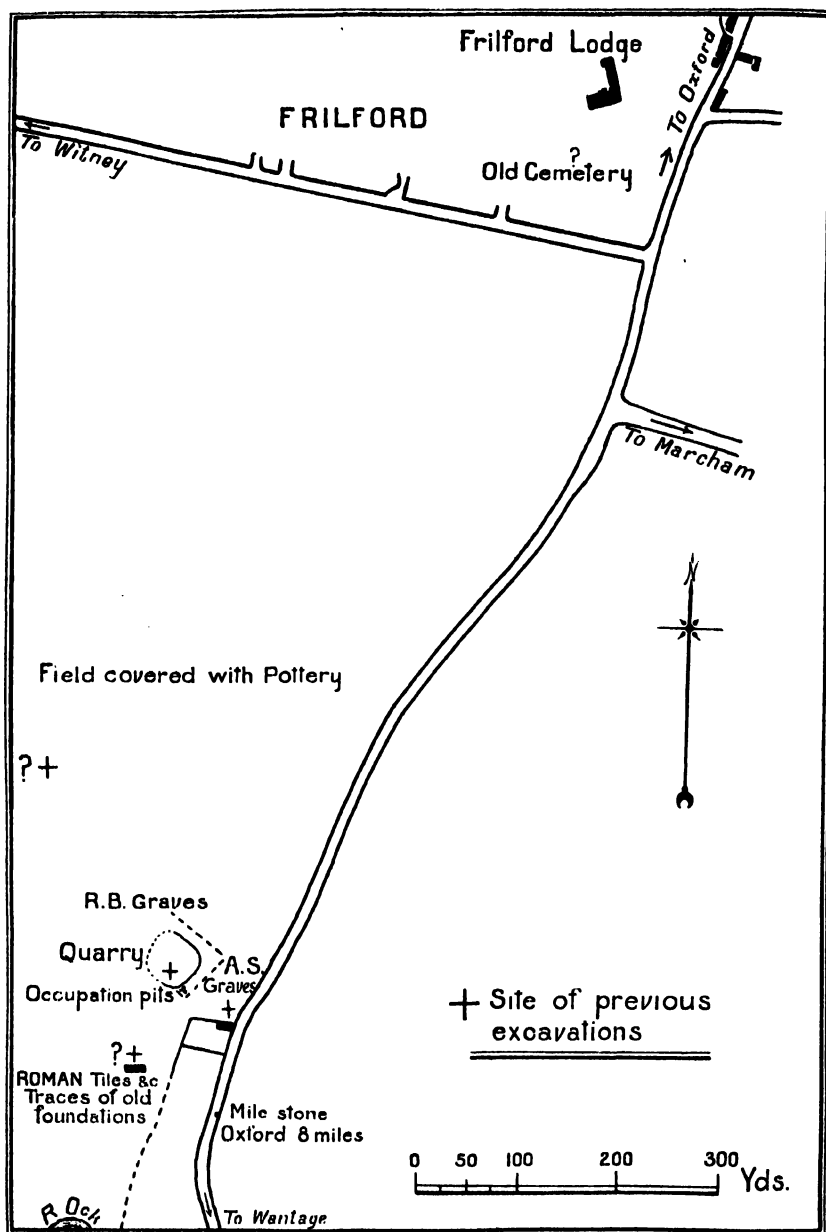


FIG. 1. Sketch-map showing position of Frilford cemetery.

north-west was excavated by Sir Arthur Evans and Professor Moseley in 1884.¹

The Wantage road is stated on some maps to be a Roman road, but this is uncertain. Although finds here have been fairly numerous, it is clear that the site is extremely extensive. Scattered graves certainly extend as far as the village of

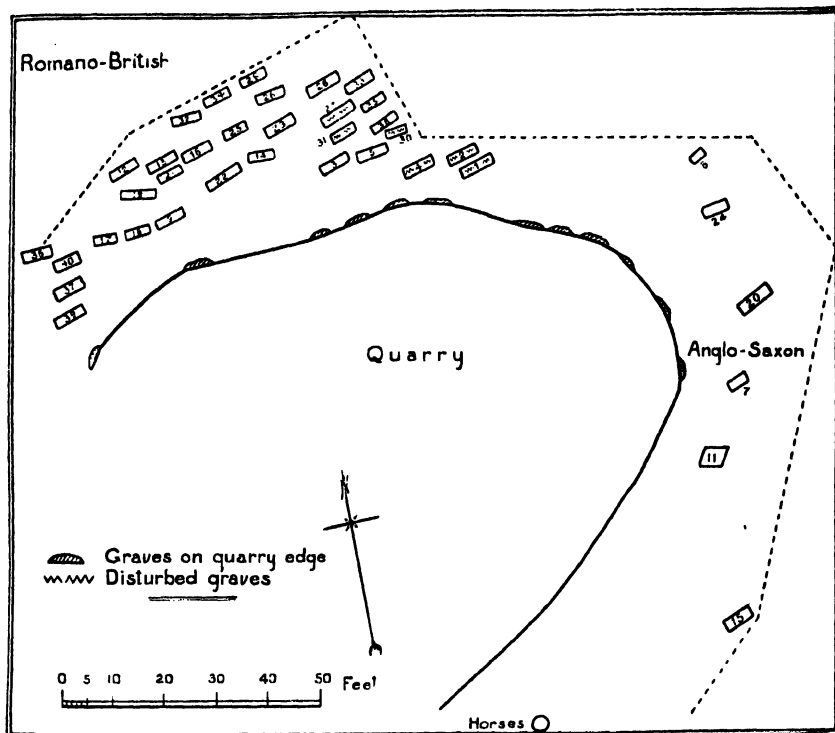


FIG. 2. Plan of the Frilford cemetery.

Frilford, as skeletons were said to have been found on the site of Frilford Lodge, and local tradition suggests that the cemetery does really cover a wide area. The small corner excavated contained forty graves, and it became clear when the long vacation and the time for ploughing the land arrived that we had by no means finished the site. Rolleston excavated 134 graves, and it is certain that a large number has been disturbed by the falling of the quarry face; indeed, the quarry contains a large number of scattered human bones (see fig. 2). The position of the old graves can be seen in the quarry face.

The cemetery can be conveniently divided into two parts. The

¹ *Archaeological Journal*, liv, 340-54.

north-western part was with one possible exception Romano-British. The south-eastern was Anglo-Saxon. The two were not found side by side : the area at present existing between the two portions of the cemetery was trenched but nothing was found. The north-east limit of the Romano-British cemetery has been defined, but other limits are not known. The cemetery appears to extend a certain distance to the west ; but excavations on the west of the actual quarry failed to find any graves. A Saxon grave was found in 1912 by Mr. Leeds and myself in the northern corner of the quarry, indicating that probably both Roman and Saxon graves occurred on the site.

Nature of the Site. The geological strata are clearly defined and of importance for our purpose. From above downwards there is first a layer of black humus used for ploughland varying from 30 cm. to 40 cm. (12 in. to 16 in.) in depth with occasional pockets. For convenience of terminology this layer will be called 'plough'. Immediately beneath the 'plough' is a floor of broken oolitic stone, very well defined and occurring everywhere except over the Romano-British graves ; in cases where it did overlie these latter it showed signs of having been removed when the grave was dug, and thrown back again when the grave was filled in. Beneath this floor, and often indistinguishable from it, we sometimes, but not always, found a sandy stratum, made up of fairly large and small stones in a broken-down oolitic matrix. I have called this the 'stony layer'. The fourth stratum was found to be hard oolitic rock.

Romano-British Graves. The Romano-British graves had been cut in the oolite with considerable pains. The rock is hard, and until a working surface has been cleared it can hardly be worked with a pick. The graves were cut to a depth of about 30 cm. (12 in.) in the oolite in the case of adults, but children's graves and some women's graves to which I shall have occasion to refer later were shallower. As a general rule the graves were 50 cm. (19 $\frac{3}{4}$ in.) broad and 165 cm. (5 ft. 5 in.) long for females and 185 (6 ft. 1 in.) for males. The feet lay towards the north-east, but although there were definite rows, placed head to foot in some cases with great regularity, the system was not strictly adhered to. It would appear that at a late date in the use of the cemetery certain of the graves were disturbed to make way for later burials (graves no. 1, 2, 4, 27, 30, 31). The disturbed graves contained such complete, though broken, skeletons, that there is little doubt that whoever disturbed them buried them carefully again. It will be seen from the plan that burials 33, 35, 38 do not follow the usual arrangements, and one body (38)

actually had no grave cut for it in the rock, but was buried in the plough.

Grave Furniture. The Romano-British graves contained a number of iron nails which appeared from their position to have been used as coffin nails. In some cases coins had been placed with the body, and in one grave (38) the coin was actually in the mouth. There is reason for believing that this grave was later than the graves to the west of it. Most of the coins found are too damaged for recognition.

The only other objects found in the graves were a number of echini (fossil sea-urchins). I was at first inclined to think that they had been placed there on purpose, and Mr. Henry Balfour suggested to me that as they are known as 'fairy loaves' in some parts of the country they may have been conventionalized offerings to the dead, taking the place of food. Further experience of the site has inclined me rather to the view that the presence of these fossils was due purely to chance, as they do occur in the rock. We have in a few cases found them *in situ*, but they were certainly more common in the graves than elsewhere, and the fact that they appear to have been placed opposite the joints of the skeleton would seem to suggest that there was some method employed in the arrangement.

Coffins do not appear to have been an invariable rule; in some graves a Roman tile or piece of flat stone had formed a lining to the grave. They may have formed 'packing' where the coffin did not fit the hole in the oolite, or have taken the place of a coffin, but they were in no case continuous. One grave was filled with a series of flat oolite stones which may either have formed part of the sides or, more probably, the top of the grave. In grave 31 a fragment of a spoon was found. The grave, however, had been disturbed.

Sherds, which are extremely common over the Anglo-Saxon part of the site, were found less frequently in the neighbourhood of Romano-British graves, and very rarely, except in the unusual graves at the east end of the cemetery, in the graves themselves; no whole pots were found in the Romano-British graves.

The bodies were extended on the back; in some cases a stone had been used as a pillow. The hands were arranged as follows:

Both hands at side: 3, 14, 17, 19, 22, 23, 28, 32, 38.

Left hand at side, right forearm and hand flexed over pelvis: 26, 29, 35, 36, 39.

Right hand at side, left forearm and hand flexed over pelvis: 25 (child), 33, 34, 37.

Both forearms flexed over pelvis: 5, 7, 8, 9, 40.

Children were buried in shallow graves ; the men usually in deeper graves and some women, whose osteological remains suggest a less refined type, were found in shallower graves, for example, no. 17.

A good deal of evidence of Roman occupation was found away from the Roman tombs in the neighbourhood of the Saxon site, about 50 yards south-west (see fig. 1). In addition to very large numbers of sherds, pits below the level of the plough were found full of red earth. In these were found fragments of Roman pots of which sufficient remained to suggest that they were placed in the pits, either whole or in a recently broken state. From a study of the ground, I am inclined to believe that these pits were not dug and filled up again with earth as was done with the graves, but that they were either used as occupation pits or as receptacles for rubbish. The remains of a Romano-British brooch were found in the plough, and a coin of Crispus (317-26). Close to these pits we found the bones of several horses. There was no evidence for dating them, and they may have been waste agricultural products. From the condition of the bones, however, it may be safely argued that they were not modern.

Saxon Graves. In spite of considerable trenching only five Anglo-Saxon graves were discovered, and a small cist, numbered 6 on the plan, carefully made of rough-hewn stones. The top had been disturbed in ploughing the land, and nothing was found inside. The cist was a slightly irregular trapezoid, the length being just over 50 cm. ($19\frac{3}{4}$ in.), and the breadth about half the length ; the floor was made of flat oolitic stones. These appeared to have been put down first. A single row of side-stones, six in number, had been then put up. On top of them flat stones had apparently been placed in position, but these had either fallen or been removed, probably in ploughing, as the top was only just below the surface of the ground.

The Saxon graves were just below the surface of the land, and did not penetrate into the oolite, to which circumstance we owe their extremely bad preservation. As far as could be judged, a hole was dug through the upper part of the stony layer, and the body was placed in it, whether with or without a coffin it was impossible to decide, and large flat stones were placed on top so as to form a flat pavement over the grave. In the grave were found numerous animal bones, sherds, oyster-shells, and sometimes Roman coins.

The Saxon graves are numbered on the plan 7, 11, 15, 20. No. 7 consisted of a series of large stones forming almost a flat surface, just below the level of the soil, so close that it seems

strange they were not ploughed up. Underneath the stones lay the body of a female child. A Roman coin was found in the plough close to the graves.

No. 11 was that of a woman; the right forearm was flexed over the pelvis. No. 15 was also that of a woman; the position of the hands could not be determined. The contents of these two graves will be described later. No. 20 contained the body of a man, but no grave furniture; the right arm lay alongside the body; the left forearm was flexed over the pelvis. The grave



FIG. 3. Part of the contents of grave no. 11 (the upper scale is for the pot only).

was made of large stones laid flat, and some large pieces of Roman tile. Outside the flat stones there appeared to have been two definite alignments of stones set on edge. The outside measurement of the grave was 2.06 m. by 0.74 m. (6 ft. 8 in. by 2 ft. 5 in.). All the Saxon graves were oriented with the feet slightly to the north of east.

The contents of these graves are not of striking character. In grave no. 11 (see figure 3), a woman's grave, the following objects were found: over the breasts two well-preserved gilt saucer-brooches decorated with a common five-point star design with a zigzag border, both with remains of iron pins; a long bronze pin with looped end to which now adheres some iron rust over the left

breast; along the outside of the upper third of the left femur a small iron knife; miscellaneous beads, three of amber including one large discoid example, two tubular of dark and light-blue glass, four of inlaid paste and four plain glass of different colours, and one of bronze, all grouped together over the pelvis close to the left forearm; two small Roman coins, one of Magnentius, the other of Constans, among the stones which covered the grave; lastly, by the head, a small hand-made vase of squat form with pronounced angle at the middle of the body, 70 mm. ($2\frac{3}{4}$ in.) high and 118 mm. ($4\frac{5}{8}$ in.) in diameter, decorated with a horizontal band of impressed chevrons and plain incised lines round the shoulder and with vertical incised lines on the lower half of the body, each of these latter lines starting from between low excrescences round the middle of the vase. Similar small accessory vessels are familiar from Anglo-Saxon interments elsewhere, as at Bright-hampton, Fairford, and the like.

In grave 5, also that of a woman, was found only a pair of small 'applied' brooches, the 'applied' disc of plain bronze unfortunately in a very broken condition. Enough, however, remains to show that the design had a well-executed border of running spirals, suggestive of an early period of Saxon occupation, of which other signs have appeared among previous discoveries in the same cemetery.

Another larger pot, also hand made, of plain globose form, 140 mm. ($5\frac{1}{2}$ in.) high, and 140 mm. ($5\frac{1}{2}$ in.) in diameter, and without decoration, was unearthened.

Grave 24 had the appearance when first discovered of being a normal Saxon grave. Six flat stones and two Roman tiles lay on top. At a depth of 50 cm. below the surface we found the head of a pig, which appeared to have been severed from the body before being buried. Pottery and an oyster-shell were found below this level, but hardly any above the skull. Other fragments of a pig's skeleton, including the tibia, were met with, mostly under the head. Apparently a similar find was made in the Anglo-Saxon cemetery at East Shefford,¹ but neither the type of animal buried nor the disposition of the bones is stated. From a careful examination of the grave it would appear that the pig's head was placed in position and the stones and tiles placed carefully on top. That the labour of this operation should be undertaken without specific purpose seems unlikely. The suggestion that appears probable is that in the absence of a corpse the usual funeral ceremonies had been gone through, including the funeral 'wake', and that the remains of animals had been

¹ H. Peake and E. A. Hooton. *Journ. Royal Anthropol. Institute*, xlv (1915), 92.

buried in the grave as usual. It is not so much a case of substituting a pig for a man, as of making a cenotaph for the absent corpse, though it may have been a case of substitution. At the west end of the grave, but not under the stones, the frontal bone of a cow was found together with some calcined osseous fragments, whether animal or human it was impossible to determine.

Of the two Saxon graves without insignia one was the tomb of a child. The Saxon graves were much scattered, and it was only by prolonged digging that any were discovered.

It would seem that the part of the cemetery explored differs to a certain extent from the part examined by Rolleston. He named five classes of interments: (1) Roman leaden coffins, (2) cheaper Roman burials, (3) Anglo-Saxon cremations, (4) shallow, unoriented Anglo-Saxon graves independent of, and often above, their predecessors, (5) deeper oriented Anglo-Saxon graves with stones set round the body.

No burials of the first class were found. In the second class Rolleston states that stones do not appear to have been set along the sides of the graves. We found, however, in certain graves which we had no reason to suspect were not Romano-British, that stones had been set on edge beside the body, normally either at the head or beside the lower part of the leg (e.g. 18). One grave, almost certainly of Romano-British date, had a layer of stones lying on top or mixed up with the body. We were able to confirm the fact that aged skeletons preponderated. According to Rolleston the number of the sexes was unequal, 48 male, 34 female were recognized; in our part, 13 male, 12 female were discovered. These numbers do not confirm Rolleston's theory that one part of the cemetery was reserved chiefly, but not exclusively, for those of one sex. A point on which considerable stress should be laid but which is not commented on by Rolleston is the contrast between one group of persons and a second. There is evidence on anatomical grounds for suggesting that we have a class of people, possibly hewers of wood and drawers of water, who, instead of sitting on chairs or reclining on couches, habitually sat on their haunches, as all except the most civilized do to-day, and possessed other features which suggest a primitive type. In contrast to these menials we have a more refined and modern type. It is not always possible to classify the bodies, but as a general rule the distinction is very clear; it is one that is due to habit of life rather than to racial differences.¹

¹ In order to test the question of racial differences observations have been made on some Oxfordshire villages. As far as our present evidence goes it would appear

I do not feel confident that all the Roman graves belong to the same period. Nos. 30, 31, and 27 were probably disturbed to make way for three new graves; the soil, also the bones, although thoroughly broken, had been replaced with apparently a certain amount of care. It is impossible to say how long a time had elapsed between the making of the earlier and later graves. No direct evidence is available from archaeological data.

Rolleston's three classes of Anglo-Saxon graves do not seem to correspond with those found this year. We found no traces of cremation burials, with the possible exception of a small cist; no unoriented Saxon burials were found, and the oriented Saxon burials with stones set round them were extremely shallow. Lastly, Roman and Saxon graves were entirely distinct. As there is little doubt that the cemetery was in use over a long period, it would seem probable that chance led different excavators to parts of the cemetery which happened to have been in use at different times.

DISCUSSION

Mr. LEEDS congratulated the author on the thorough manner in which he was continuing the work of Professor Rolleston. The most interesting discoveries made half a century ago were the variety of the interments and the presence of Anglo-Saxon cremation. Half a mile from the site, on the road to Faringdon, traces of a Roman bath had been found, and there had probably been Romans at Frilford from the first. Their graves in the cemetery were probably not obliterated when the Saxons came; and there was archaeological evidence that the interval was inconsiderable. Two cruciform brooches, of a rare type in the Saxon area, had been given by Rolleston to Cornell University; and specimens had also been found at East Sheffield,¹ fourteen miles to the south. It was reasonable to suppose that the Saxons derived certain forms of ornament from Roman models still accessible on their arrival. The Oxfordshire Archaeological Society had begun excavating at Woodeaton, and hoped to explain

that the racial type existing in Frilford in Romano-British times still survives round Oxford to-day. One or two of the villages show less variation than the Frilford material, but the general type has certainly not changed. The bones from Frilford do, however, show some differences which are not to be observed in the modern bones. These differences are of an anatomical character and refer to the leg and ankle. Some of the Frilford bones of this part of the body can hardly be distinguished from modern; others again do differ very considerably, and form the 'primitive' type referred to above. All the bones suggest evidence of considerable muscularity, and some of the men probably possessed a fine physique. On the whole, however, as far as our present evidence goes—all the bones have not yet been thoroughly examined—apart from the habit of squatting and eating hard food the old inhabitants of Frilford do not appear to have differed intrinsically from the modern people of the neighbourhood.

¹ *Journ. Royal Anthropol. Inst.*, xlv, 112, pl. iii.

the landmark called 'the flowery floors' in a charter by the discovery of a Roman mosaic pavement. The brooches exhibited were of familiar types, and he thought that the 'applied' brooch, which in the present case had a single ring of spirals, was the prototype of the solid saucer-brooch with which it was often associated.

Mr. REGINALD SMITH observed that the Roman burials at Frilford, which lay east and west with the head at the west end, were late in the period and probably Christian, which would account for the absence of any grave-furniture.

The PRESIDENT said the excavations had been carried out with the scrupulous care demanded by modern standards of research. Though the yield was not imposing, it was not generally realized how much observation was required to distinguish in the earth such small and delicate antiquities. The Saxons had evidently been to some extent in touch with Roman civilization, as the frequent discovery of pierced coins in the graves bore witness. He was glad to hear complimentary references to Professor Rolleston, whose partnership with the late Canon Greenwell had resulted in the publication of *British Barrows*.

Palaeolithic implements found in Sweden

By OSCAR MONTELIUS, Hon. F.S.A.

THE ingenious and persistent researches of the Swedish geologist, Baron Gerard de Geer, have taught us when the last Ice Period came to an end here in the north.¹ The ice began to melt and retire from the southern coast of Scania 15,000 years before our time. There cannot be more than an error of a few centuries in this calculation.

But the southern border of the enormous ice-masses covering the north of Europe in the last Ice Period was not on the south coast of Scania; it lay farther south, in Brandenburg. It is uncertain what length of time was necessary for the ice to retire from Brandenburg to Scania. However, if we consider how slowly the melting was going on in the first millenniums, and how long it took for the ice to melt in the southern part of Sweden, it is highly probable that about 5,000 years were required to transfer the ice border from its most southerly point to Scania. Consequently, the beginning of the melting period in our northern region, i.e. the end of the last Ice Period in northern Europe, must fall about 20,000 years before our time.

Now the end of the Ice Period in north Germany was evidently contemporary with the end of the Ice Period in central Germany and France. In this way we find that the end of the last Ice Period in central Europe falls about 20,000 years ago. This result is of a much higher value than the opinions formerly expressed on this problem. The result just stated may be taken as trustworthy.

The French and German archaeologists agree in the following results of their investigations regarding the later Palaeolithic age :

(1) The periods succeeded each other in this order :

Le Moustier period (*Moustérien*)

Aurignac " (*Aurignacien*)

Solutré " (*Solutréen*)

La Madeleine " (*Magdalénien*)

Mas d'Azil " (*Azilien*)

Le Campigny " (*Campignien*), this being the transition period between the Palaeolithic and the Neolithic epochs.

¹ Gerard de Geer, *A Geochronology of the last 12,000 years*, in the *Congrès géologique international, Compte rendu de la XI^e Session*, Stockholm, 1910, p. 241. There the ice-melting in the most southern part of Sweden was not considered.

(2) The end of Le Moustier, or the beginning of the Aurignac period, corresponds with the end of the last Ice Period. The Aurignac period began about 20,000 years ago; and, as it probably lasted nearly 5,000 years, the Solutré period began about 15,000 years ago, or at the same time as the southern coast of Scania began to be habitable.

When the ice melted in Scania, plants and animals immigrated there, and with them came man. This was about 15,000 years ago, in the Solutré period. If we consider what has been already said, it is clear that the oldest implements that we can expect to find in Scania as souvenirs of man ought to be such as are contemporary with implements of the Solutré period found in central Europe.

Have we really discovered in that part of Sweden any antiquities similar to those of the Solutré period in central Europe?

Figs. 1 and 2 are two flint implements found in Scania, and fig. 3 is one of the Solutré period dug up in France. We see that they are all exactly of the same type.

In the Scandinavian Peninsula, such 'amygdaloid' flints occur only near the southern and western coasts of Sweden and Norway, just those parts of our peninsula that first became ice-free. Those flints prove that these parts of Scandinavia were already inhabited in the Solutré period, and this result has been confirmed by other discoveries.

In Denmark a spear-head of flint (fig. 4) was discovered under circumstances indicating that it dates just from the time when the ice was melting. Such spear-heads are not known from any other part of the Stone Age here in the north, but in France flint spear-heads of the same shape (figs. 5 and 6) were used in the Solutré period! Lately similar flints have been found also in Norway on the western coast, and the circumstances of the discovery prove that they also belong to a very remote period.¹

The Solutré period was followed, as we know, by the Madeleine period, which is characterized by the preponderance of bone weapons. In the period following the age of 'amygdaloid' flints in Scandinavia the preponderance of bone weapons is also evident. Another characteristic feature of the time following the Solutré period in central Europe is that many very small flint flakes ('microliths', see fig. 7) have been discovered. In Scandinavia, and especially in Sweden, have been found a great number of spear-heads of bone with small flint flakes inserted (fig. 8). Many of them have been well preserved in peat bogs. All this

¹ *Oldtiden*, IX (Kristiania, 1920), p. 146.

indicates the same evolution in the Scandinavian region as in central Europe during the Madeleine and Mas d'Azil periods.

In the next period we have also the same types in both regions. In central Europe the Mas d'Azil industry was succeeded by



FIG. 1. Palaeolithic flint implement, Scania ($\frac{1}{2}$).



FIG. 2. Palaeolithic flint implement, Scania ($\frac{1}{2}$).

that of Campigny, characterized by such flints as fig. 9. The same type (fig. 10) is common here in the north during the Shell-mound period which represents the transition from the Palaeolithic to the Neolithic Period, just as the Campigny period does in central Europe.

A most interesting question is: Do we know anything about the human race immigrating into Sweden after the end of the Ice Period?

The only race living in Central Europe then and several milleniums afterwards, down to the end of the Palaeolithic Period, was the dolichocephalic Cro-Magnon (or Aurignac) race. And we understand that the first man that came to Sweden, hunting the reindeer and other animals following the retiring ice-border, must have come—like the plants and animals—from central Europe. Consequently, it is evident that the race immigrating into Sweden, the first occupants of our country, must have been a dolichocephalic race. After that time we can find no trace of any new immigration to the Scandinavian region entitling us to speak of a new people supplanting the old. And when we begin to find human skeletons with skulls well enough preserved to be studied the great majority of them are found to be dolichocephalic, and of the same fine type as the Cro-Magnon race on one side and present-day Swedes on the other.

These facts have convinced me that the first immigrants here after the end of the Ice Period were our ancestors. If it is so, then the names of lakes and rivers in Sweden ought to be of Scandinavian (Germanic) origin. And that is just the case. Professor Hellqvist, of the University of Lund, examined those names some years ago, and found that all names of Swedish lakes belong to our language.¹ Therefore I may assert that our ancestors were the first invaders of Sweden. Their descendants are the actual Swedish people. We have ourselves 'made our country', have cultivated it and made it habitable. Our pedigree is a very fine one!

¹ Elof Hellqvist, *Studier öfver de svenska sjönamnen, deras härledning och historia* (Stockholm, 1903 -6).



FIG. 3. Flint implement of Solutré period, France ($\frac{1}{2}$).

This result is of great interest to Swedes now living; but it is of a certain interest also for other peoples.

Let me not be misunderstood. I do not say that a Germanic people¹ invaded Sweden 15,000 years ago, but that our ancestors

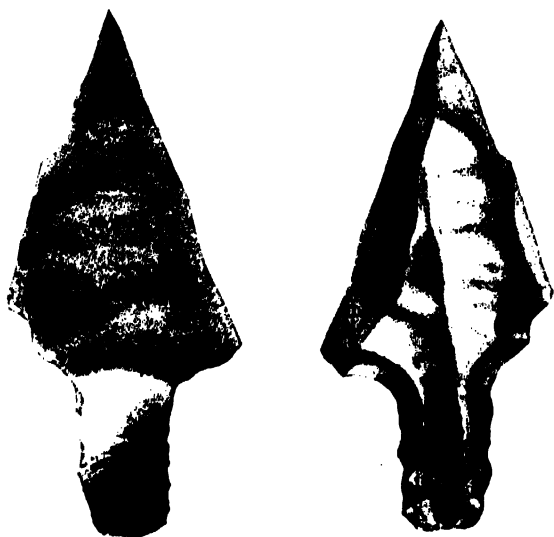
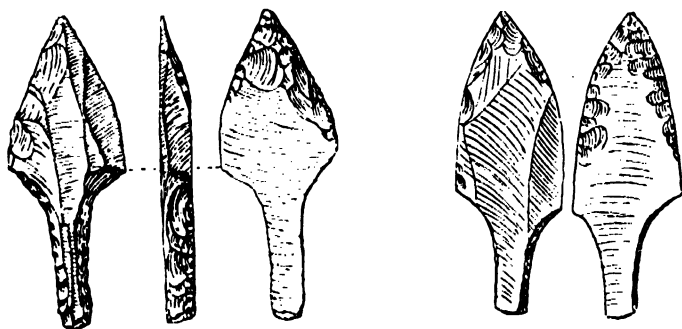


FIG. 4. Spear-head of flint, Denmark ($\frac{1}{1}$).



FIGS. 5 and 6. Spear-heads of flint, Solutré period, France ($\frac{1}{1}$).

came then. At that time no German, no Celtic, no other Aryan race existed. During the many thousands of years that elapsed after the Ice Period, the inhabitants of the Scandinavian countries and the northern part of Germany, like the inhabitants of western and eastern Europe, all being descendants of the tribes living in the

¹ By Germanic people I do not mean the people inhabiting Germany, but the race that included the inhabitants of all Scandinavian countries and Germany, as well as the Anglo-Saxons.

Ice Period, have by a most natural evolution, and as a consequence of living under different circumstances, become Germanic in the north, Celtic in the west, and Slavonic in the east. All these and most of the other peoples of central and southern Europe



FIG. 7. Small flint flakes (microliths), Mentone ($\frac{1}{1}$).



FIG. 8. Spear-head of bone with flint flakes inserted, Sweden ($\frac{1}{3}$).

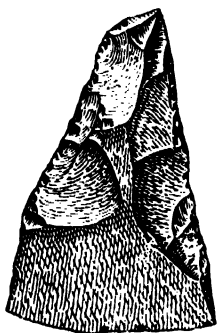


FIG. 9. Flint implement, Campigny period, France ($\frac{2}{3}$).

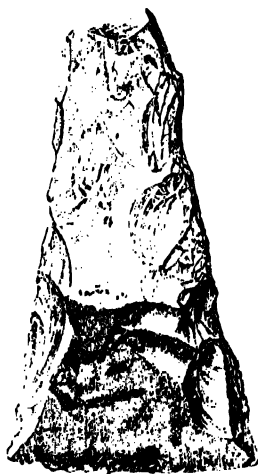


FIG. 10. Flint implement, Sweden ($\frac{2}{3}$).

speak Aryan languages, and are considered to belong to the same great Aryan race.

If it can be proved that one of these groups, the Germanic, living in the most northern part of Europe, is descended from tribes of the Ice Period and consequently of European origin, then it is highly probable that the Celtic, Slavonic, Italian, and

Greek groups are also of European origin. The Aryan groups existing in Asia—the Persian and the Indian (Hindu)—are also probably of the same origin, having emigrated from Europe to Asia a long time ago. In other words: the Aryan race must be of European origin, not Asiatic.

We know of two Ice Periods here in the north, and some geologists speak of more than two such periods in central Europe. Here I have considered only what happened after the end of the last Ice Period. A most interesting question is: do we know of any traces of inhabitants in the Scandinavian countries before the last Ice Period, i.e. in the interglacial period?

Seeing that the ice swept away almost everything, as the glaciers are doing to-day, such traces can hardly be expected. However, some interglacial deposits having been discovered in the southern part of the Scandinavian region, it is not impossible that some traces of interglacial man also may be found. A few flints have actually been met with in these deposits, but it is not perhaps certain that they were worked by man.'

¹ N. Hartz, *Bidrag til Danmarks tertiære og diluviale Flora* (København, 1909), p. 202.

On the Site of the Battle of Ethandun

By E. A. RAWLENCE, F.S.A.

THREE places are now recognized as possible sites of the battle of Ethandun : Edington, on the Polden Hills in Somerset ; Edington, near Westbury in Wiltshire ; and Heddington, about six miles south-east of Chippenham, also in Wiltshire. The object of the present paper is to endeavour to disprove the possibility of Edington on the Polden Hills being the scene of the battle, and to show that an overwhelming mass of evidence favours Edington, near Westbury.

The latest and most complete argument in favour of the Polden Hills as the site of the battle is to be found in Messrs. Whistler and Major's *Early Wars of Wessex*. After a careful examination of the evidence and of the topography of this site, I am of opinion that the plan of campaign suggested by these authors is most unlikely, if not altogether impracticable, from a military point of view.

The composition and situation of the two contending armies in the spring of 878 seem to have been as follows. The Danes were a very mobile force, as they were mostly mounted. Guthrum had made a rapid march from Cambridge to join an army of foot soldiers which were about to land at Wareham. These forces had been defeated by Alfred on sea and land in 876, but 'the mounted force stole away from the levies by night and went to Exeter', where it wintered. In the spring of 877 the army left Exeter, and in the early autumn of that same year raided Mercia. Then 'during mid-winter after twelfth night the army stole away to Chippenham and over-rode the West Saxons' land and there settled. And many of the folk they drove (by force of arms and through need and fear) over the sea, and of the remainder the greater part they brought under their sway, except Alfred, and he with a small band with difficulty fared through the woods and moor fastnesses.' Thus the Saxon Chronicler ; and Asser is equally clear : 'And at that time King Alfred, with a few of his nobles and some warriors and vassals besides, led an unquiet life in great tribulation in the woodland and marshy parts of Somerset.' It therefore seems indisputable from the authority of the contemporary historians that the king and his followers were few in number and in no way capable of resisting the Danish host, which had then probably been strengthened by the remnant of Hubba's army that had survived the defeat by Odda at Cynuit. There can be little doubt

that the Danes could at that time put into the field thousands to Alfred's hundreds, and yet we are asked to believe that Guthrum was held up on the Polden Hills between Easter and Whitsuntide unable to move, and in the meantime was making most elaborate dispositions in order to crush Alfred's hunted band. Further, there is nothing in any of the early Chronicles to indicate that the Danes even knew of the king's hiding-place.

It is further suggested that the Danes camped on a site in the Polden Hills because it afforded the best position to overlook Athelney and ultimately to attack Alfred's stronghold. No military commander could have chosen a worse base from which to attack, as he would have had to cross about six miles of waterlogged moorland; not moorland of rich pasture such as now, with well-cleansed dykes to drain off the surface water and embankments to keep the tidal waters within bounds, but a swamp of reeds and rushes mostly covered with water at spring tides, with the small islets of Weston Zoyland, Middlezoy, and Othery cropping out above the alluvial morass. Under such conditions it would obviously have been impossible for a mounted force such as that of the Danes, and most difficult for a large body of foot, to cross the marshes, especially in the late winter or early summer when this campaign took place. An examination of the Geological Survey maps makes it clear that any military commander wishing to attack Alfred in Athelney would undoubtedly have made his main camp at High Ham or Dundon Hill, which are infinitely stronger positions than Edington camp and far better situated for an attack on Athelney, to which they are much nearer. From either of these vantage grounds high and rocky land exists nearly down to Borough Bridge camp, which is only a mile from Athelney. The attacking force could then have followed the high ground through Langport to the south of Athelney, and thus Alfred's small force would have been hopelessly bottled up and compelled to surrender. At the same time the occupation of Dundon Hill would have commanded the great Fosse Road and have prevented help coming to the king from the north and east. We are, however, asked to believe that this all-important position was left unoccupied; yet its importance is so obvious to the authors of *Early Wars of Wessex* that in their hypothetical campaign it is suggested as the first point of vantage seized by Alfred when he issued from his place of refuge (pp. 163-4).

Another strong argument against the Polden Hills site is the statement of Asser that there were three causes which brought about the final surrender of the Danes, 'hunger, fear and cold'. Now if, as is presumed by the authors of *Early Wars of Wessex*,

the Danes, when defeated at Edington, retired to Downend camp, which is at the extreme west end of the Poldens and adjoins the mouth of the river Parret, it is practically impossible that either hunger or cold could have helped to bring about the surrender. If the Danes had been encamped for at least seven weeks at Edington, making their great preparations for an advance on Athelney, they would surely have collected some ships in the Downend Pill which adjoins the camp there, and could therefore have used these after their defeat either as a means of supply or of escape. It should also be borne in mind that the battle was fought about Whitsuntide, the surrender taking place fourteen days after. As Easter in 878 fell on March 23rd it would bring the date of the surrender well into the last week in May. Now, as the highest part of Downend camp is only 25 ft. above sea-level, and as this district is one of the mildest and earliest in the west of England, it is difficult to conceive how cold at that time of the year could have been a factor in the surrender of the Danes.

Chapter 3 of *Early Wars of Wessex*, entitled 'The Battle of Ethandun and the Peace', contains a description of the hypothetical lines of the battle. It is admitted that the Polden Hills consist of a narrow ridge, flanked on either side with impassable marshes except during neap tides, and with the western extremity resting on the Parret at Downend camp. It is suggested that Alfred camped the night before the battle at Butleigh, which is identified with the Aeglea or Iglea of the Chronicles, and that he won his victory by a surprise attack on the following morning, when he drove the Danes westward before him until they were cornered in Downend camp, where, after a siege of fourteen days, they surrendered from the effects of 'hunger, fear and cold'. From this position it is stated that 'the only way of escape from the end of the Poldens was through Alfred's hosts and so back to the Fosse Way' (p. 165).

A careful examination will show how unlikely the whole of this theory is. In the first place an astute leader, such as Guthrum had proved himself to be, with so large a force of horse at his disposal, would hardly have allowed his army to be surprised and bottled up in the way suggested. Secondly, bearing in mind that numerous bodies of Danes from the outlying forts would be constantly arriving—and no doubt messengers from the fighting men at the Edington camp would be continually passing to and from the hill camps on the edge of Salisbury Plain, carrying messages or bringing in supplies, all of whom must have passed through Street or Butleigh—it is inconceivable that Alfred could have brought up his large force and camped within seven or eight miles

of the enemy overnight in sufficient secrecy to make a surprise attack the next day.

Thirdly, it is assumed that Alfred drove the Danes westward, where all means of escape were cut off and they were starved into submission. If Guthrum and his forces had really been encamped for several months on the Poldens there would undoubtedly have been a considerable fleet of Danish ships congregated in the Parret estuary. This fleet and the assistance of the tidal ford at Combwich would, as already pointed out, have afforded a ready means both of escape and of providing supplies.

Lastly, the authors of *Early Wars of Wessex* in considering the respective sites make some startling geographical errors in the distance of Athelney from the Wiltshire sites and in the points of the compass. As these errors are used as arguments in favour of the Polden site on account of the brevity of Alfred's lightning campaign it is necessary to correct them. On page 149 it is stated that 'it is impossible to read into the history any incidents which justify belief in bases of operation sixty or more miles apart across forest country'. As a matter of fact Athelney is as the crow flies under forty miles from the Wiltshire Ethandun, and it is very little more by existing roads. This error is repeated on pages 153 and 157. On page 162 Butleigh is stated to be 'twenty-five miles from the Selwood gathering-place', which elsewhere is identified with Stourton tower. These two points are less than fifteen miles apart as the crow flies. On page 206 'the distance about seventy miles from Athelney' of any Wiltshire site is stated to be 'too great to allow of the constant fighting recorded, and this objection is insuperable', but as the true distance is about forty miles it would not appear to be 'insuperable'. Also on page 157 it is stated that there were two points which overlooked Athelney and Borough Bridge, viz. 'High Ham south of Athelney and the other the highest point of the Polden ridge to the eastward', i.e. Ethandun camp. As a matter of fact High Ham is due east of Athelney and Ethandun due north, and from the Danes' inability to occupy High Ham to the south of Athelney, and thus enable the 'co-operation with a ship force', it is argued that it was necessary first to force the stronghold of Borough Bridge. Now as High Ham is well to the east of Borough Bridge there was obviously nothing to hinder Guthrum from occupying it, and it is inconceivable that any skilled leader would not have occupied such positions as High Ham and Dundon Hill, since to have done so would have immediately cut off Alfred's means of communication with the north and east.

The plan of campaign propounded by Messrs. Whistler and

Major is thus seen to be improbable. An attempt must now be made to prove that a more probable and better-devised one can be traced in favour of the Wiltshire site.

Alfred's condition during 877 and the early part of 878 seems to have been forlorn in the extreme. The Saxon Chronicles state that 'he with difficulty fared through the woods and moorfastnesses', whilst Asser states that 'at that time King Alfred, with a few of his nobles and some warriors and vassals besides, led an unquiet life in great tribulation in the woodland and marshy parts of Somerset'. If there is any truth in the traditional burnt cakes, his identity was not even known at Athelney. He probably remained in this condition until the great victory of Odda over Hubba at Cynuit heartened him and his loyal thanes sufficiently for him to organize his subjects to the south and east of Salisbury Plain, on the confines of which the Danish occupation seems to have ceased. Henry of Huntingdon confirms this view when he states 'King Alfred then, comforted by this victory', etc. The Chronicles proceed 'therefore at Easter King Alfred with a little band wrought a work at Athelney, and from that work, with part of the Somerset men which was nighest thereto (nobles and vassals) waged war untiringly against the army'. This probably refers to the entrenchment of the Borough Bridge camp as Alfred's first move. This hill, locally known as the Mump, is a remarkable cone rising abruptly out of the marsh. John of Wallingford states that 'his men being on every side recovered, Alfred occupied the hill fortresses and fortified the places which were difficult to pass, and closed the way to the enemy'. The most probable meaning of this passage is that Alfred, when he felt himself strong enough, issued forth from Athelney and Borough Bridge and occupied High Ham and Dundon Hill, and probably that Odda, with whom Alfred would have had easy communication by the ridge of high ground through the Lyngs and North Pethernton, crossed the Parret from Cannington camp at the tidal ford at Combwich and occupied the Polden Hills. Such a move would have effectually cut off Guthrum from any further assistance from a Danish fleet in the Parret estuary and would at once have disclosed to Guthrum the seriousness of Alfred's intentions. John of Wallingford states that 'Guthrum, realising the danger of the situation, summoned from all parts the men who had settled in England and had occupied fortresses in the hills, ordering them to quit these and join the army. He saw that there was danger in delay, as the king's army increased in strength daily. Wherefore he also drew together a large force.' Now, assuming that Guthrum was encamped at Edington near Westbury and that King Alfred was occupying the

fortresses on the edge of the Somerset marshes, it is obvious that Guthrum could have drawn his reinforcements from the north and east, which were under his control, whilst Alfred would have drawn his from the south-east and west, which was apparently free from Danish occupation. Thus each leader would have collected his forces without these reinforcements coming in contact with each other. This would obviously occupy some time, and probably much happened between Alfred's departure from his Somerset stronghold soon after Easter and the time when the Chronicles take up the history at the gathering at 'Eggbryht's Stone'. This hiatus can, however, be filled up by local site-names and traditions which will now be traced.

The conspicuous landmark known at Stourton Tower traditionally marks Alfred's camping ground after he left Athelney, and Henry Hoare about 1766 erected the tower to commemorate the event. The old trackway known as 'the Hardway', a steep ascent from the west passing close to the tower, is still known as 'Kingsettle Hill', whilst the wood immediately to the north is called 'King's Wood'. The Hardway, one of our oldest British trackways running east and west, after passing through the Selwood Forest, crosses the Mere Downs and thence goes through Chicklade Bottom eastward. Until the advent of the railway this trackway was the great thoroughfare by which fat stock from the Somerset grazing lands went to the London and eastern markets. Graziers brought their cattle over this trackway to the old inn which formerly existed at Chicklade Bottom, where they met the up-country dealers, who took the beasts over and drove them to their various destinations. My father could remember these transactions.

As objection may be taken to the acceptance of these old traditional place-names, I here give an extract from Hoare's *History of Wiltshire* wherein Sir Richard Colt Hoare justifies his acceptance of this traditional site. 'The cause of this spot being selected for such a Memorial arose from the name of this hill being "Kingsettle" and therefore supposed to be the spot where Alfred, after quitting his solitary retirement in Athelney, first met his adherents, who flocked to him, from more southern and eastern countries, to join his standard. I am, in general, no friend to *conjecture*, especially in matters of history, which require facts to substantiate them; but as I have strong reasons to suppose that a very ancient British way led down from this hill from Wiltshire into Somerset, and as this is the direct line to Petra Ecbrecti or Brixton Deverill, where Alfred halted his army the first night, I shall not, I trust, be deemed fanciful as to the derivation of the modern name of Kingsettle hill.'

I now venture on a bold suggestion that Alfred's next move was not to the 'Petra Ecbrieti' but to another entrenched camp about two miles north of the town of Shaftesbury to which the same place-name and traditions attach. Alfred had a great affection for Shaftesbury, as is witnessed by the magnificent abbey which he built and endowed there soon after his victory, and of which he appointed his daughter Aelgiva the first abbess. This move would have necessitated Alfred's passing through the south end of Penselwood Forest and across the Gillingham Forest, both of which would have screened his movements.

When all arrangements had been completed the king marched due north with an increased army by the road which runs through East Knoyle, Pertwood, and the Deverills. This road running from south due north is probably one of the oldest trackways in England. It starts at Poole Harbour, passes to Badbury Rings and Busbury camp near Blandford, and runs along the western edge of the chalk hills which form the eastern barrier of the Blackmore Vale to Shaftesbury and then northward to Warminster. One great feature of Alfred's concentration appears to have been his use of this road running from the south to the north almost directly to the Danish lair at Edington, and the utilization of the roads which cross it from west to east at various stages to pick up his reinforcements. Thus whilst at Kingsettle near Shaftesbury he would have gathered his levies from Poole, Wareham, Blandford, etc., to the south, and also from the west and east by the Sherborne and Old Sarum road which passed through Shaftesbury. That this is a very old road is proved by the fact that a portion of it in East Stour parish is still called 'the Sherborne Causeway', thus indicating a very ancient if not a Roman origin. Many Roman coins have been found on the Castle hill on the west side of Shaftesbury, which indicate a Roman occupation, and I know of the site of two Roman villas at Sherborne.

Alfred's next camping ground was at Ecgbryht's Stone. This was evidently a prearranged trysting-place, as Asser records that 'when the king was seen, receiving him as one returned from the dead after such tribulation they were filled with boundless joy and there they camped for one night'. It is obvious from this that the various contingents, which the Chronicles state came from 'all Somerset and Wiltshire and of Hampshire that part which is on this side of the Sea', had already arrived and were waiting to welcome the king. He apparently harangued the assembled army immediately on his arrival and rested there one night and then pressed forward.

A point of the utmost importance is the identification of Ecgbryht's

Stone. Asser records that it 'is in the eastern part of the wood which is called Selwood'. Sir Richard Colt Hoare identified the site with Brixton Deverill, which fits in admirably with the suggested line of march, but as Sir Richard's identification was based on the fact that, according to Domesday, Brictric held Deverill in 1066, it can hardly be considered as proof of the name being in use nearly 200 years earlier. I would venture to suggest a derivation more sound chronologically and more in conformity with the name Ecgbryht. In Geoffrey of Monmouth's *History* (bk. xi, chap. 2), amongst the leaders who perished with Modred in the battle in Cornwall against King Arthur, is one named Egbrict. Although too much weight must not be placed on Geoffrey of Monmouth, it may perhaps be assumed that Egbrict was an early British name. As Brixton Deverill is well within Arthur's alleged sphere of activity, it is possible that a British chief of this name may have held possessions in this district and thus have been the origin of the prefix.

It is now necessary to show that Asser's statement as to the position of Ecgbryht's Stone is correct, as Brixton Deverill is now six miles east of the nearest existing remains of the forest. This point is proved by Sir R. Colt Hoare, who quotes documents to show that Hull or Hill Deverill, which lies to the east of Brixton Deverill, was situated within the bounds of this extensive forest. If this can be assumed, it is of the utmost importance in proving the true site of the great battle. The authors of *Early Wars of Wessex* state that 'the exact position of Ecgbryht's Stone we may leave for the present as there is no question but that it is known within a few miles, and is probably well represented by Stourton tower raised to commemorate Alfred's doings'. If the true site of Ecgbryht's Stone can be shown to be eight miles east of Stourton Tower it places the great rendezvous of Alfred's army twenty-three miles east of Butleigh, the alleged camping ground of the army on the following night. It would obviously be impossible for Alfred to have moved his army, which was probably composed to a large extent of infantry, such a distance through Selwood Forest and the low lands beyond in twenty-four hours and then have had it in a fit condition to move forward again another nine miles westward early in the following morning along the Polden Hills to make the surprise attack on the Edington camp. The site at Brixton Deverill, however, is an easy march of six miles to Cley Hill or nine miles to Westbury Leigh, the two suggested sites of Alfred's last camping ground. The south end of Brixton Deverill parish, known as Lower Pertwood Farm, affords many facilities for such a rendez-

vous, mainly because the important Roman road, which runs from Uphill at the mouth of the Axe along the Mendips through Great Ridge and Grovely woods to Old Sarum, crosses this farm just north of the homestead, as is shown on the Ordnance Survey maps. The Chronicles state that at Ecgbryht's Stone 'came to meet him all Somerset and Wiltshire and of Hampshire that part which is on this side of the sea'. Now by this Roman road the Somerset men would have arrived from the west, and from the east would have come the Wiltshire and Hampshire contingents. At Old Sarum this road branched out into three, the northernmost going to Marlborough, the central one to Silchester, and the eastern to Winchester. It is probable that another ancient way went in a more southerly direction through the New Forest to Christchurch, thus gathering all the Hampshire men from 'that part which was on this side of the sea', by which the Solent was probably meant. Could a better trysting-place for this fine military move have been found? Selwood Forest on the west would have screened the movement of the Somerset forces, and Grovely and Great Ridge woods would have done the same for the Hampshire and Wiltshire contingents for miles. Further, Lower Pertwood itself is a large basin-shaped tract of down-land admirably adapted to conceal the concentration of a large body of troops, and the numerous banks, indicating old enclosures, which are still visible on the down-lands evidently show that this site was at an early period very heavily occupied.

On the following day the whole army moved forward. The reasons for Alfred's short stay at Ecgbryht's Stone are obvious, as he was only about ten miles from the lair of the Danes at Edington. The next camping ground was Aecglea or Iglea, which was the last halt before the great battle. By those who accept the Wiltshire site of the conflict this name is generally considered to represent either Cley Hill in the parish of Corsley, a remarkable conical outlier of the chalk rising to a height of 800 ft., or Leigh, a tithing of Westbury. The Cley Hill is a very conspicuous and bare feature in the landscape and quite visible from the hills near the Bratton camp just above the White Horse near Westbury, so that apparently it would not have been consistent with Alfred's aim of effecting a surprise attack to have exposed his men with their camp-fires on this bare height. The Westbury Leigh site, on the other hand, was probably then in a wooded area in the vale and possibly provided another of those cross-road connexions such as the king had used at Shaftesbury, the Hardway, and Brixton Deverill. There must almost certainly have been a roadway communicating between the important Roman centres of

Bath (Aquae Solis) and Old Sarum (Sorbiodunum), and if so it would probably have followed this line, thus passing through Westbury and Warminster and connecting up with the great highway already referred to somewhere in Great Ridge or Grovely. In this way Alfred would have picked up belated levies from north Somerset and Hants and Wilts., who would have been warned of the intended departure of the army from Brixton Deverill and would have been thus deflected northward to Leigh.

Just north of the hamlet of Westbury Leigh is a farm called Penleigh, which may be Alfred's final camping ground. If so, as it is only about four and a half miles west of Danesley (the supposed Danish camping ground near Edington) and outside the drift of Guthrum's reinforcements and camp followers, it would have provided Alfred's men with an admirable jumping-off ground for the surprise attack early on the following morning, after they had had a few hours' rest.

We now come to the crucial point, the site of the battle (fig. 2). Just to the east of the village of Bratton there is a very remarkable combe in the chalk hills which has an area of fairly level land in the bottom on the greensand formation, but the chalk hills rise around it in an unusually precipitous manner from about 350 ft. to the 600 ft. contour on the Ordnance Survey. To the south, on a knoll overlooking the vale of the Bath Avon, is the Bratton entrenched camp at a height of 746 ft. above sea-level. In the north-east corner of the combe called Luccombe Bottom a copious spring of most excellent water issues from the greensand at the base of the chalk hills. Thus this site affords an exceptionally fine camping ground, screened from the wind on every side and with an abundant supply of purest water. That this was the site of Guthrum's camp seems possible, as it is called Danesley to this day. The site renders a surprise attack peculiarly easy as, if the Danes in a false sense of security had failed to picket the high ground round their camp, Alfred and his men could have surrounded the rim of the combe and thus have fallen upon the camp before the Danes were aware of the proximity of the Saxon army.

It is clear from all accounts of the battle that the first great struggle took place in a position outside the fortified camp, and that when the main Danish force had been broken up, such units as were able fought their way into the entrenched camp, where they were besieged for fourteen days before they surrendered under the stress of 'hunger, fear and cold.' Bratton camp is 746 ft. above sea-level and exposed to the sweep of the north and east winds from Salisbury Plain, so that cold may have been one of

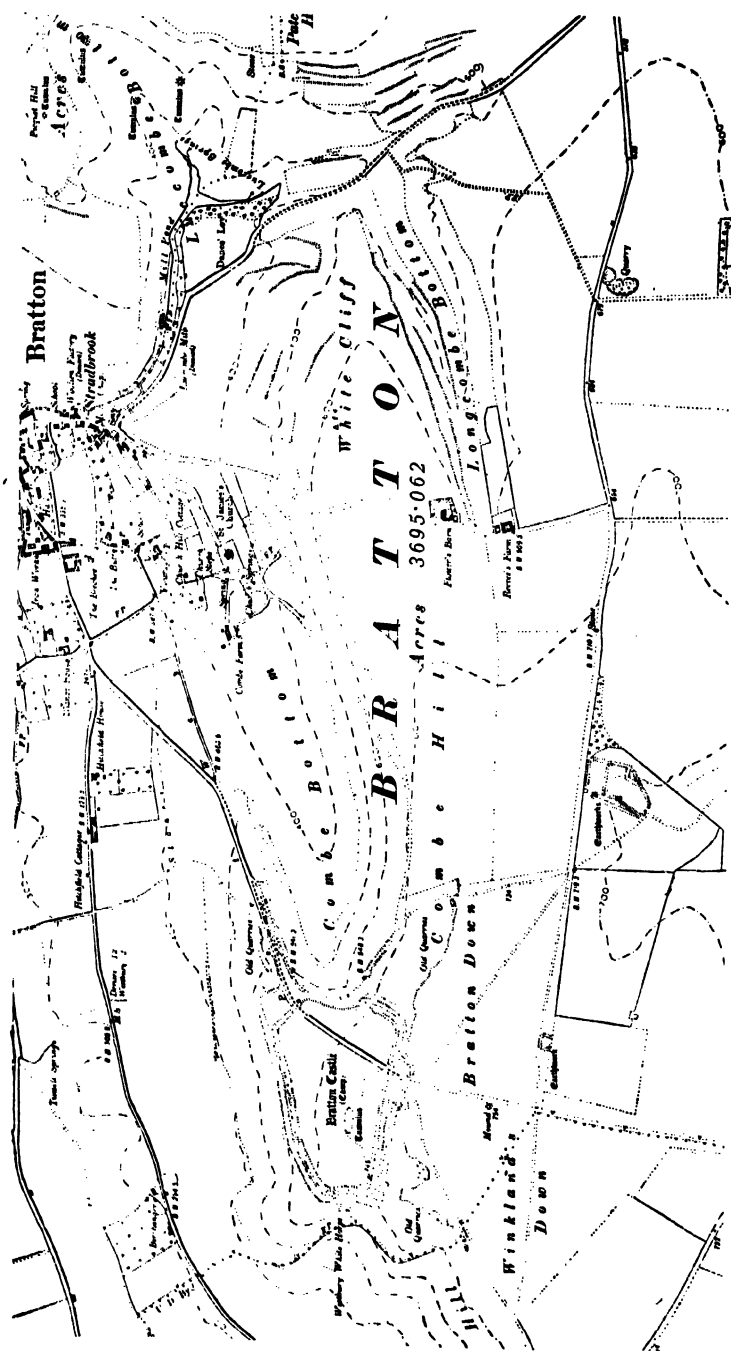


FIG. 2. Map of the district round Bratton Castle.

Reproduced from the Ordnance Survey Map by permission of the Controller of H.M. Stationery Office.

the causes of the surrender of the Danish army, even at the end of May, and its isolated position made supply impossible unless the camp had been heavily provisioned beforehand.

There is one other point that remains to be dealt with, that is the conversion of Guthrum and thirty of his chief men from Paganism to Christianity. Their public acknowledgement of Christ in baptism took place, according to the Chronicles, at Aller three weeks after the conclusion of peace. Asser, however, gives the period as seven weeks, and surely no one should have known better than he, as he probably more than any one else would have had to prepare Guthrum and his companions for the sacred rite. The difference in the length of the interval is important, as the authors of *Early Wars in Wessex* in more than one place use the shorter period as an argument in favour of the proximity of the Polden site to Athelney and Aller.

If we accept Asser's statement that the baptism took place seven weeks after the victory, it leaves ample time for Alfred's court to have returned to Wedmore, where the preparation of Guthrum and his chiefs seems to have taken place, and for their journey across the Fens to Aller church. The probable reason for this procedure would be that, according to their usual custom, the remnant of Hubba's army, in passing up the Polden Hills to join their friends at Chippenham and Bratton, would have destroyed all the churches along their line of march north of the King's Sedgemoor. Hence Aller at the south-east corner of the moors would have escaped destruction and may have been the nearest available church.

I have now reviewed, I trust in a fair and judicial spirit, the two most generally accepted sites for this important battle, comparing the possibilities and probabilities of the suggested campaigns from a military, historical, geographical, and geological point of view. I have attempted to show that the campaign propounded by the advocates of the Polden Hills site is one that would not have done credit to the high military qualities which had hitherto distinguished Guthrum and his chiefs. On the other hand, the course suggested as followed by Alfred to the Wiltshire site discloses an extraordinarily well-planned lightning campaign wherein Alfred, after careful preparation, placed himself with his small forces upon an ancient road leading from south to north direct to the camp of his foes. Having secretly warned his loyal subjects to join his army by roadways running at right angles from east to west at certain specified points and dates, he then moved forward by rapid marches, picked up the various contingents as he progressed, and, falling unawares upon an over-confident foe, gained a glorious victory.

A reply to Mr. Rawlence's paper on the Battle of Ethandun

BY ALBANY F. MAJOR, O.B.E.

AN attempt to rehabilitate the theory that the site of the battle of Ethandun was at Edington-by-Westbury was to be expected, and we welcome Mr. Rawlence's paper as the first attempt we know of to work out a Wiltshire theory of the campaign.

We are glad also to have an opportunity of admitting and correcting the errors as to distance and as to certain compass bearings pointed out by Mr. Rawlence. The former had already been brought to our notice by a Somerset friend. From Athelney to Edington-by-Westbury is just under forty miles, and from Butleigh to the Stourton tower less than fifteen, as stated by Mr. Rawlence, and the distances in *Early Wars of Wessex* should be amended accordingly. The errors, however, do not affect the argument. According to Asser and the Chronicle, King Alfred waged war from Athelney untiringly against the army, i. e. the main Danish force, and Ethelwerd speaks of daily battles. It is difficult to see how this could have been, had that army remained even forty miles away, and no supporter of the Wiltshire theory has yet explained this. Mr. Rawlence does not tackle the objection, and it may fairly be called insuperable.

As regards the compass bearings, High Ham lies slightly to the north of east from Athelney, Edington Hill nearly NNE., not due north as stated by Mr. Rawlence. Here again the errors do not affect the argument. We said nothing about the Danes' *inability* to occupy High Ham. Our argument is that the river Parret being the only channel by which a fleet could penetrate the marshes, and Downend the furthest point inland where ships could lie at the foot of the Poldens, being some twenty miles from High Ham by land, i. e. round the marshlands, effective co-operation between a land force at High Ham and a fleet at Downend would have been impracticable until the Borough Bridge fort, commanding the Parret, had been forced.

Admittedly from Twelfth Night till Easter 878 Alfred was in dire straits and forced to keep in hiding. But after Hubba's defeat the position changed, and when Alfred began to throw up a work on the conspicuous mount at Borough Bridge and to wage war against the army his whereabouts must have become known to the Danes. The remnants of Hubba's force are said to have

joined Guthrum, and the latter would naturally march west, when he heard of Hubba's fall, to meet any advance of the victorious Saxons ; he would find out what Alfred was doing, and would be compelled to keep Athelney under observation. As to the best point from which to do this, to Athelney from Ham Hill is a little over three miles, from Edington Hill some six and a half, and from Dundon camp nearly nine. A view of Athelney from the latter is masked by Ham Hill, and we do not know why Mr. Rawlence says it is much nearer Athelney than Edington Hill. Nor do we understand his statement that from High Ham or Dundon Hill high and rocky land exists nearly down to Borough Bridge. The unbroken marsh between Ham Hill and Borough Bridge is nearly two and a half miles wide, and nearly a mile and a half wide between Ham Hill and Othery, where it is narrowest. But the marsh between Borough Bridge and Edington Hill is broken by a chain of marsh islands, Othery, Middlezoy, Weston Zoyland, and Chedzoy, which gave Alfred comparatively easy access from Athelney to the mainland and offered a route by which the Danes might hope to storm their way into Alfred's stronghold.

This was not such an easy task as Mr. Rawlence seems to think. It took William the Conqueror six months, from April to October 1071, to capture Hereward's camp of refuge at Ely, and it is no reflection on Guthrum to suggest that he may have spent six weeks in preparing for a similar task.

According to our reading, Hubba's defeat at Cynuit Castle must have drawn Guthrum west to face this new danger, even if Alfred's position was not known to the Danes, and the landing at Parret-mouth was made in concert with an advance by Guthrum to take Alfred between two fires. The Saxon victory encouraged the king to abandon his concealment, and by raising a conspicuous work at Borough Bridge and waging a ceaseless guerilla warfare he forced Guthrum to fix his attention on the marsh stronghold. The Danish occupation of the Poldens enabled Guthrum to keep touch with the fleet at Downend and to cover the approach from Athelney along the islands, while he was preparing to attack by the same route.

His direct line of communication with his base at Chippenham would be along the Fosse Way to East Pennard, thence through West Pennard and Glastonbury to Street and the Poldens. The rendezvous of Alfred's army would need to be clear of this line and well away from, but within marching distance of, Guthrum's force. Mr. Rawlence is at pains to reassert the doubtful claim of Brixton Deverill to be the site, in order to advance a favourite

proposition of the Wiltshire theorists, that this place is not within marching distance of Edington-on-Poldens. As to this we have consulted eminent soldiers, and Mr. Rawlence clearly underrates the marching powers of British infantry. Before the battle of Talavera the 43rd, 52nd, and 95th Foot, who had just bivouacked after a march of twenty-four miles, were called on to advance another thirty or more, and completed the whole distance in twenty-six hours; and the Highland Brigade, on 17th February 1900, marched thirty-one miles in twenty-four hours, and attacked Cronje's laager at 7.45 a.m. on the 18th. Infantry nowadays, moreover, carry rifle and ball ammunition, pack, and great-coat, while the Saxons' equipment would consist only of shield and seax, with spear, axe, or sword, and a food-wallet.

Alfred probably fixed the date for the muster at Ecgbryht's Stone so as to coincide with an expected attack on the islands, which he may have learned from spies (*vide* the story of his visiting the Danish camp disguised as a minstrel), or may have foreseen from observing Guthrum's preparations and knowing when the tides would suit best for an attempt to cross the marshes. His movements at any rate seem to have been timed so that he seized the heights in rear of Guthrum just when the latter had marshalled his army to advance upon the islands. We infer this from Simeon of Durham's statement that Alfred found the pagans ready for battle, while it is equally clear from other writers that he took Guthrum by surprise.

As to cold being a factor in forcing the Danes to surrender, Mr. Rawlence overlooks the vagaries of the English climate. Most observers know that there is usually a spell of very cold weather about the second or third week in May. A resident in Bridgwater tells me that North Somerset does not escape this and that he has had a clematis killed by it in his garden in a single night. The winds blow keenly over the marshes of the Parret and the Brue, and in Alfred's time this spell of cold weather would fall near the end of May.

Finally, it is argued that from the Poldens the defeated Danes could have escaped, or obtained supplies, by sea. But after the remnants of Hubba's force joined Guthrum, the Devon levies under Odda remained in possession of the left bank of the Parret, and could reoccupy the camp in Cannington Park commanding the tidal ford at Combech. The river passage could be blocked by sinking a ship or two in the fairway, and Alfred was no doubt as alive to this as he was to the possibility of blockading the Danish fleet in 896 by obstructing the course of the river Lea.

The most striking point in Mr. Rawlence's plan of campaign

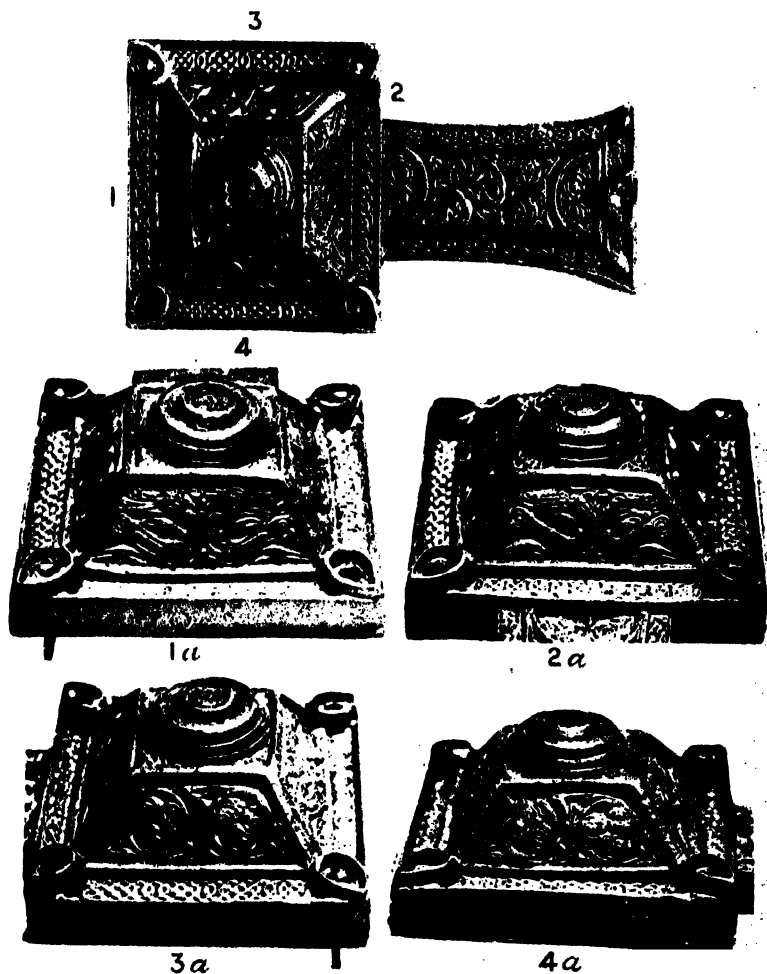
based on Edington-by-Westbury is the space given to Alfred's supposed movements between his departure from his Somerset stronghold 'soon after Easter' (*sic*) and the gathering at Ecgbryht's Stone. This ignores the important part played in Alfred's plans by the Athelney position and the untiring warfare thence, and is clean contrary to Asser and the Chronicle, who state distinctly that it was in the seventh week after Easter that Alfred rode to Ecgbryht's Stone, that the assembled Saxon army met him there, and that he marched against the Danes the following day. This leaves no room for the rapid marches by which Mr. Rawlence supposes Alfred to have picked up various contingents at certain specified points and dates as he progressed. We may fairly ask of any plan of campaign that it should account for the 'untiring warfare' and should follow the sequence of events as recorded by Asser and the Chronicle, and Mr. Rawlence's failure to do this knocks the bottom out of his theory.

Beyond this we are asked to believe that, in spite of Hubba's defeat and the active warfare carried on by Alfred from Athelney, Guthrum remained at Edington-by-Westbury, forty miles away, and made no attempt to get into touch with the enemy; that Alfred fixed the rendezvous for his army at a spot only about ten miles from the Danish camp; that Guthrum's intelligence department was so bad that he failed to discover the assembly of an immense Saxon force ten miles away, even though that force marched still nearer to him on the following day; and that an 'astute leader such as Guthrum', in a false sense of security, failed to picket the high ground round his camp, although he knew the danger of the situation and was concentrating his forces to meet it!

An Irish Bronze Casting formerly preserved at Killua Castle, co. Westmeath

By E. C. R. ARMSTRONG, F.S.A., Local Secretary for Ireland

THE bronze casting (fig. 1) was recently purchased by the Royal Irish Academy. It was one of the antiquities preserved at

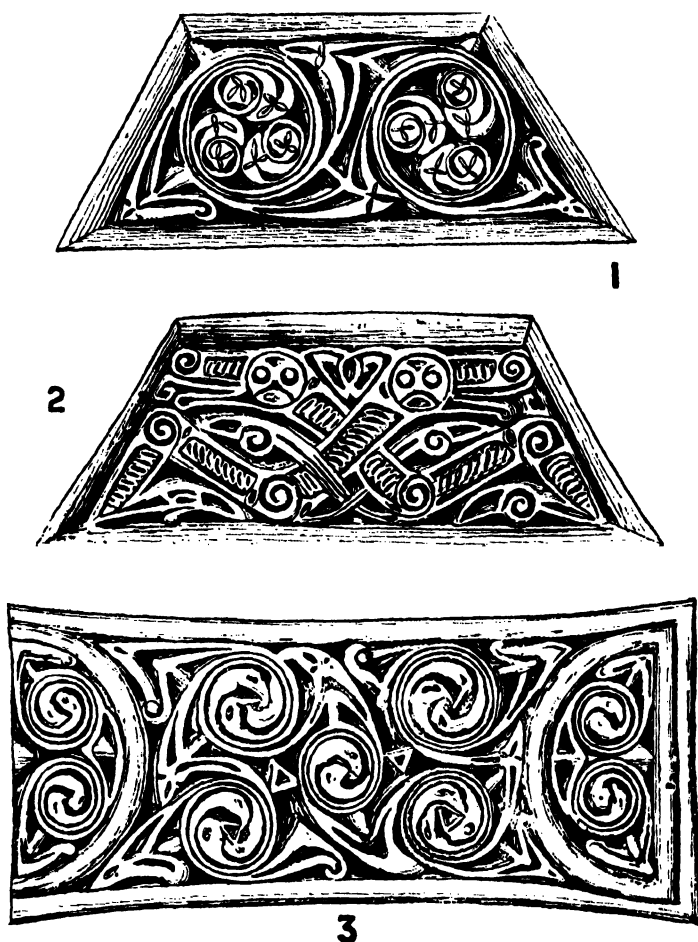


Irish Bronze Casting (slightly below 3).

Killua Castle, co. Westmeath, but its previous history is unknown. The length of the casting is 4.4 in.: the raised box-shaped

portion is 2.4 in. in breadth, while the flat portion measures at its widest part 1.5 in. Possibly it was the limb of a cruciform mounting for a book-cover. Its ornamentation is admirable.

As will be seen by the illustrations (fig. 1 and fig. 2 no. 3) the flat portion of the casting is ornamented as follows: first comes an



Details of Bronze Casting (enlarged to twice natural size)

outside border of interlaced work extending from the end to each side, where it joins the enlarged part, there being at the end-corners small raised leaf-shaped ridged divisions, and in the centre a half-circular setting. Within the border at each end are two semicircular divisions containing whorls enclosing two birds' heads: the pattern in the centre consists of five whorls, of which

the central encloses two birds' heads, the others three. The raised box-shaped part of the casting is ornamented round the base with interlaced work, an empty drop-setting being placed at each corner.

The four sides (fig. 1 and fig. 2 nos. 1 and 2) are ornamented in pairs: one pair is decorated with whorls ending in trefoils, having also trefoils in the spandrels; the second pair is decorated with interlaced animals having crocodile-like heads ornamented with eyed and mouthed circles resembling human faces. The junction of the animals' limbs is marked by spirals, a fore- and hind-limb being in each case discernible. The bodies of the animals have a double outline and are shaded with sloping lines: in the place of an ear each has a 'lappet', these being interlaced to fill the space between the backs of the animals' heads.

The top of the box-shaped portion consists of a circular double setting, the base of each corner being ornamented with an interlaced trefoil.

Mr. Reginald Smith, F.S.A., in his paper on the Steeple Bumpstead boss,¹ has suggested an acceptable sequence for various works of art belonging to the finest period of Irish design; there is therefore no need further to elaborate the subject. The casting now illustrated is, however, in my opinion, a piece of workmanship of high quality which may with confidence be assigned to the best period of Irish art, that is to the eighth century A. D.

¹ *Proc. Soc. Ant.*, xxviii, pp. 87-94.

Discoveries at Amesbury

By SIR LAWRENCE WEAVER, K.B.E., F.S.A.

[Read 16th December 1920]

ON 26th June 1920 workmen in the employ of the Ministry of Agriculture and Fisheries, whilst excavating at the Ministry's Farm Settlement at Amesbury, discovered some bones of a skeleton. The site lies approximately 175 yards north-east of Ratfyn Barrow (marked on the Ordnance Map), and about 6 in. below the surface of the chalk. The grave was about 7 ft. long and about 2 ft. 3 in. in depth. Mr. P. Farrar, of Bulford Camp, a local archaeologist, was at once communicated with, and discovered further remains after a careful search. An extract from his Report to the Ministry reads as follows :

‘The second skeleton, which I extracted with my own hands, was at the feet of the first; the bones had been somewhat destroyed, the lower jaw, for instance, lying about 6 in. away from the skull. It appeared as if the body had been dropped in anyhow, for the skull actually rested on a thigh-bone. Rats, moles, cats, and dogs, however, could all get at a shallow interment such as this, and disarrangement of the bones may have been due to action by animals. Close to the place where the head of the first skeleton lay, the workmen in my presence turned up the axehead which you have. Close to the grave on the north side is a pit filled with dark earth which contained some fragments of charcoal. I picked away a little of the face, but saw no relics. Depth about 18 in. but uncertain. The barrow-pit cuts through a wide shallow trench about 9 ft. 6 in. across and 18 in. to 21 in. deep at the centre, distant about 15 in. from the north end of the grave. In the north-west side of the barrow-pit was found, I understand, an urn containing bones. The bones had all crumbled in the urn, which was in a hole not more than 15 in. deep and lay in fragments.

‘I may add that there were some unimportant fragments of three types of Romano-British pottery found in the surface soil.

‘On the 15th July I revisited the site and, after clearing away some of the fallen material, reached the undisturbed chalk at the southern end of the original excavation. There appears to me to be a distinct curve on the end, and it is possible that the bodies were buried in their pit dwelling. The pit at the side on re-examination looks rather like an annexe shallower and smaller but

connected with the larger excavation ; and the whole thing is reminiscent of certain Early Iron Age pit-dwellings found by Mr. and Mrs. Cunnington, of Devizes, in Casterley Camp. In one of these were found skeletons evidently thrown in after death. It is true, however, that the workmen said the first skeleton was on its side, contracted, with hands up to the face, so we may perhaps assume a natural death.'

After his first visit to the site, Mr. Farrar reported the matter to Rev. G. H. Engleheart, F.S.A., our local secretary for Wilts. He states in his report that 'the axehead is a fine and perfect specimen made of dark green-grey close-grained quartzite, and is very similar to one figured in Evans's *Ancient Stone Implements*, second edition, p. 194, fig. 126. With reference to the disposal of these relics, I venture to urge strongly that they may be deposited in the Salisbury Museum, which is deficient in material from Salisbury Plain. The British Museum already possesses an abundance of similar objects. Our Fellow Mr. F. Stevens, the curator, is doing excellent educational work in Salisbury by the instrumentality of the museum, and the acquirement of additional objects will be of much service to him. Dr. Blackmore, of the same museum, is very competent to report on the skeletons.'

As regards Mr. Engleheart's suggestion, the Ministry does not propose to relinquish its formal ownership of the axe. Arrangements, however, will be made to place the axe in the Salisbury, South Wilts., and Blackmore Museum at Salisbury, on what will doubtless prove to be permanent loan, and it will be exhibited there with other antiquities discovered at Amesbury, which are already in the curator's charge.

Mr. REGINALD SMITH added the following notes :

In the absence of any definite association, the exhibits must be judged on their individual merits ; but several analogies are available, and there is little room for doubt that the axe-hammer dates from the earliest stage of our Bronze Age, when the dead were buried unburnt and beakers formed part of the normal grave-furniture.

The Amesbury specimen (fig. 1, *a*) certainly came from such a burial, though it is doubtful if a beaker also belonged to it : one fragment among those exhibited, $\frac{3}{8}$ in. thick, seems to belong to an exceptionally large specimen of that type, as the lip is bevelled on the inner side, a peculiarity noted on more perfect vessels at Gullane Bay, Haddingtonshire (*Proc. Soc. Ant. Scot.*, xlii, 315, 317) and at Peterborough (*Archaeologia*, lxii, 345). The other fragments belong to several vessels not of the beaker type, all no

doubt dating from the Bronze Age, but otherwise nondescript. Some over $\frac{1}{2}$ in. thick may belong to cinerary urns.

Axe-hammers or battle-axes are comparatively rare in the British Isles, but the present type is well represented; and, pending an examination of the whole series, parallel examples with some evidence of date may be enumerated here. It will be noticed that the Amesbury axe is slightly dished on the top and bottom faces, and that its depth and maximum breadth are both $1\frac{1}{2}$ in. Col. Bidder's exhibit, from the Thames at Datchet (fig. 1, *b*),

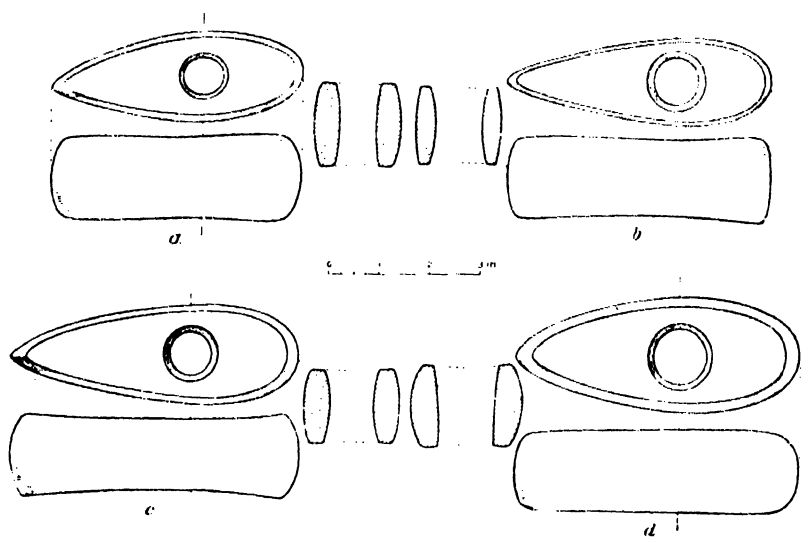


FIG. 1. Perforated Stone Axe-hammers found in England: *a*, Amesbury; *b*, Datchet; *c*, Standlow; *d*, Bulford.

is almost an exact duplicate, with the same width and depth, and only one-fifth of an inch longer: the top and bottom are nearly flat. River-finds are seldom of evidential value, but fig. 1, *c*, represents a British Museum specimen found in a barrow (Standlow, Derbyshire) by J. F. Lucas in 1867. It is $5\frac{1}{2}$ in. long, and is said to have been found with a bronze dagger, also in the museum (*Archaeologia*, xliii, 411, note 2). It is dished at the top and bottom, like the fourth illustrated here (fig. 1, *d*), which is also of the same length. This was found by Col. Hawley on Bulford Down with a primary burial of a brachycephalic man in the crouching attitude (*Wilt. Arch. Mag.*, xxxvi, 617 and 622, fig. 5). Traces of the handle were noticed, and a wedge of bone found that had been used for security. With many other finds on Salisbury Plain it was presented to the national collection.

A larger specimen, $6\frac{1}{2}$ in. long, is under Mr. Parker Brewis's

charge at Newcastle-on-Tyne Museum, and was found deep in the bed of the river Wear above Sunderland Bridge. Its site has been taken to confirm the view that this series is of Scandinavian origin, but other specimens from barrows elsewhere in England can hardly be so explained.

One of hard bluish stone veined with white (fig. 2) is illustrated in *Archaeologia*, xliii, 410, fig. 96, and in the Salisbury volume of the Archaeological Institute (1851), 110, fig. 14. It accompanied

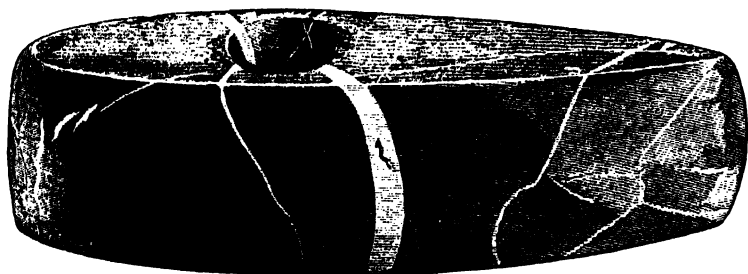


FIG. 2. Stone Axe-hammer, East Kennet, Wilts.

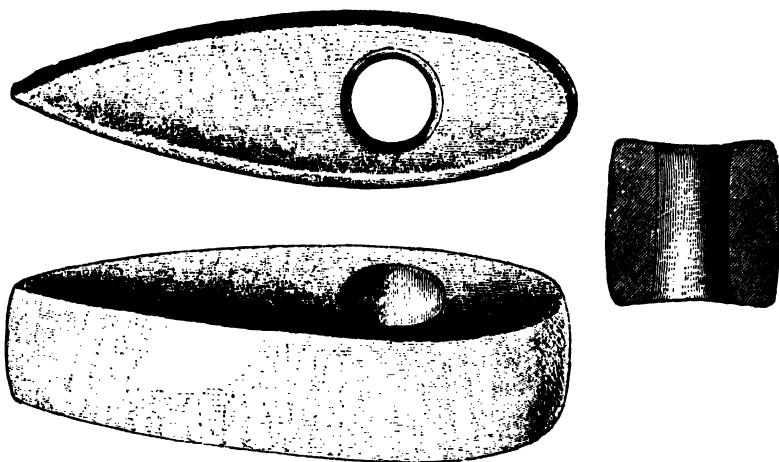


FIG. 3. Stone Axe-hammer, Bardwell, Suffolk ($\frac{1}{2}$).

a skeleton with a beaker and bronze dagger-blade in a barrow near the long barrow at East Kennet, Wilts. ; but there are glaring discrepancies in the two accounts of the find. In Weston Park Museum, Sheffield, are two with slightly expanded cutting-edge, accompanied by bronze dagger-blades, each with three large rivets. Both are of toadstone, and were found in Derbyshire with skeletons : one is 4 in. long and comes from Carder Low, the other is $\frac{1}{4}$ in.

longer and accompanied a secondary interment in a mound at Parcelly Hay, near Hartington (*Bateman Colln. Cat.*, pp. 6, 8).

Several others are quoted by Sir John Evans (as fig. 3), but not all conform strictly to the type under consideration. This is characterized by a uniform thickness from cutting-edge to the butt-end, the edge having little or no tendency to spread nor the butt to become conical. It is more than probable that this is the earliest form of the stone battle-axe in Britain, although the reverse order of development has been advocated by Nils Åberg in *De Nordiska Stridsyxornas Typologi*.

As there is apparently no predecessor in the Neolithic Period, it is necessary to account for the sudden appearance of this weapon in Britain; and its ultimate origin seems to have been in Hungary, where copper was known very early and continued in use for a long time. Axe-heads of this form were exported from that centre, and one is illustrated from Norway (fig. 4). On the

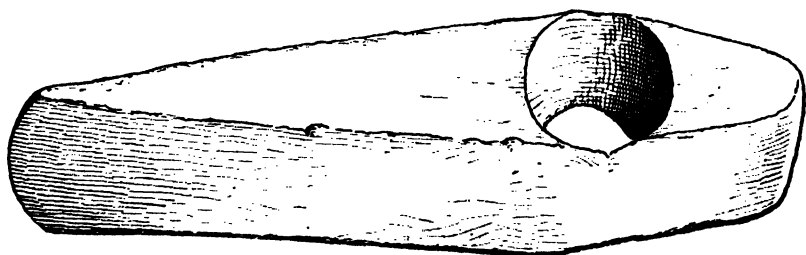


FIG. 4. Copper Axe-hammer found in Norway.

fringe of Europe metal was first worked at a comparatively late date, perhaps a thousand years after its appearance in Hungary, and remained scarce for centuries; hence the copper weapon was imitated in stone, and underwent a development that can only be explained by constant reference to metallic models.

References to several copper or bronze specimens found in Scandinavia are given by Professor Montelius in *Archiv für Anthropologie*, xxv, 467, note 1, and xxvi, pp. 472, 493; and if this argument is sound, it has an important corollary. Copper, if not bronze, was contemporary with the beakers of Britain, and there is no proof that stone axe-hammers were made in our Neolithic Period. In Scandinavia, which was much nearer the original source of metal, many of the stone battle-axes date from megalithic times (passage-graves and cists, marking the last two stages of the neolithic there). Did Scandinavia get into touch with Hungary before copper tools reached Britain from that centre, or did the British Bronze Age begin much sooner than

the Scandinavian ? There are reasons for thinking that the cist-burials of Scandinavia were contemporary with the Early Bronze Age of Britain (*Proc. Soc. Ant.*, xxxii, 19) ; but on the other hand Knut Stjerna attributed the Scandinavian passage-graves to the Copper Age (*Proc. Prehist. Soc. E. Anglia*, iii, 24). Professor Montelius thinks the Bronze Age began about the same time on either side of the North Sea ; and the stone axe-hammers afford a likely means of reaching a final agreement on this point.

DISCUSSION

Mr. PRAETORIUS had found on the sea-shore north of Anglesey a drifted Scottish boulder of granite which appeared to be a similar axe-hammer in the course of manufacture. The drilling had been begun from both faces, but, like the shaping of the stone, had never been completed.

The PRESIDENT expressed the Society's indebtedness to Sir Lawrence Weaver for the exhibit, and was not surprised to find that so beautiful a weapon dated from the Bronze Age, though it was rather an inversion of ideas to derive a stone axe from a metal prototype. He questioned whether the material was quartzite, and whether all the pottery fragments were contemporary. The bevelled lip indicated an unusually large size for a beaker.

Irish Gold Crescents

By REGINALD A. SMITH, F.S.A.

[Read 2nd December 1920]

SINCE their first publication in 1757 (*Archæologia*, ii, 32, pl. ii), the gold crescents characteristic of the Early Bronze Age of Ireland have remained in part unexplained; and the various names suggested for them reflect the prevailing uncertainty as to their use and significance. In his recently published *Catalogue of Irish Gold Ornaments*, our Fellow Mr. Armstrong has brought together all the existing material, and on consideration adopts the view that these gold crescents were worn as collars. They at first went under the name of *lunulae* or little moons, and a favourite term in later years has been *lunette*, which is generally used in French for 'telescope', and though more manageable than *lunula*, is not so fitted for international use as 'crescent'. All three names suggest a connexion with the moon, and are certainly more fully justified than 'tiara' or 'diadem', as the notion that crescents were part of the head-dress has long been exploded, in spite of the fact that the daughters of Zion, late in the eighth century B.C., wore 'round tires like the moon', for which they were reproved by Isaiah (iii. 18).

At the meeting on 2nd December two specimens were exhibited that had hitherto escaped publication. One was indeed hardly known outside the Drapers Company, and was found on the company's property at Draperstown, co. Derry, twelve miles north-west of Lough Neagh (fig. 1). It is of normal construction, engraved on one face only, with a triple row of ornament on the edges of the central portion. Most of the surface near the points is occupied by a bold chequer pattern, alternately hatched and plain, and the terminals are oval. The opening is 6 in. across and the entire width 9 in., the weight being 2 oz. 12 dwt. 14 gr. (82 grammes).

The second was already known as the Lesnewth crescent (fig. 2), and its history has been recovered by the Society's local secretary for Cornwall, Mr. George Penrose, curator of the Truro Museum. According to his report it formed lot no. 829 at the Red Cross sale at Christie's on 28th March 1917, and was described in the catalogue as 'a prehistoric gold torc found in a barrow in Cornwall: presented by the Lady Haversham'. It is certainly not a torc, but its discovery in a barrow is important,

and the present writer is informed by Mr. Dewey, of the Geological Survey, that it was found with a human skeleton.

The Truro Museum had an outline drawing of 'a gold crescent stated to have been found at Hennet, St. Juliot, near Boscastle, about 1862, and bought by Mrs. Hayter for £50: weight, 8 sovereigns'. Lady Haversham was formerly a Mrs. Hayter,

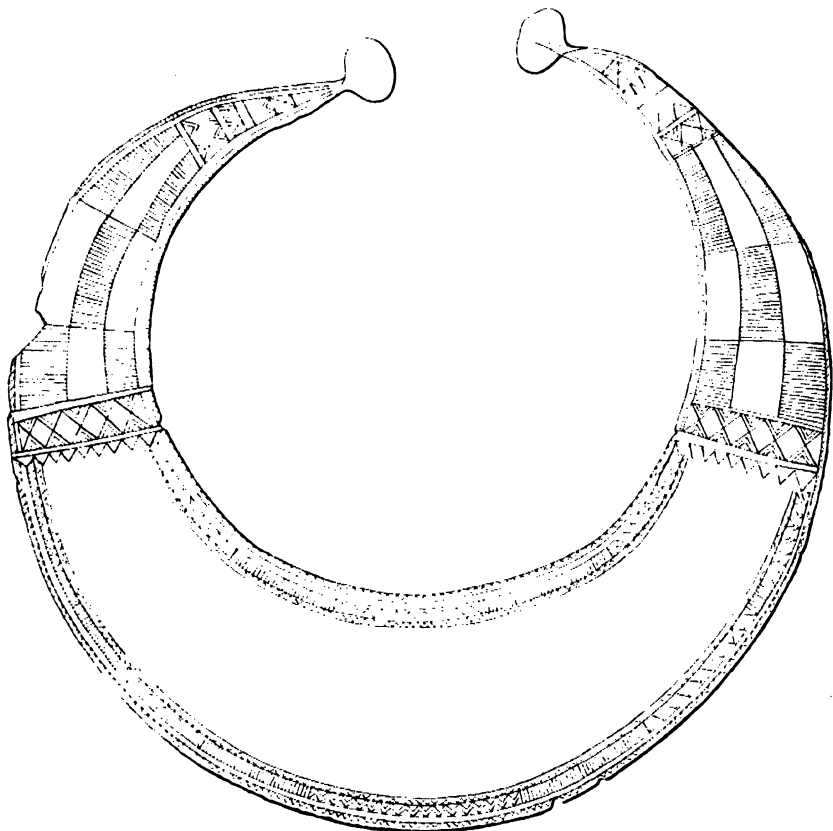


FIG. 1. Irish Gold Crescent belonging to the Drapers Company ($\frac{1}{2}$).

and Mr. Penrose was thereby convinced of the identity of the crescent, eliciting from her ladyship that it had been purchased by the late Mr. John Douglas Cook¹ for £50 and presented to her as a wedding present in 1866. She understood that it had been discovered a short time before in the district of Camelford, and having regarded it as a valuable prehistoric object had almost from the first kept it at Coutts's bank. Further inquiry enabled

¹ Editor of the *Saturday Review*, with a residence at Tintagel, Cornwall: he was buried in the churchyard there in 1868.

Mr. Penrose to state that about 1860 a workman named Tink was cutting through a marsh belonging to a farm called Cargurra, attached to Hennet, in the parish of St. Juliot, Hundred of Lescnewth, Cornwall, in order to drain the place, and at about 5 ft. from the surface came across the crescent. The finder regarded it as a sheep's collar and gladly parted with it for a trifling sum to his employers, two brothers named Lillicrapp, who then lived at

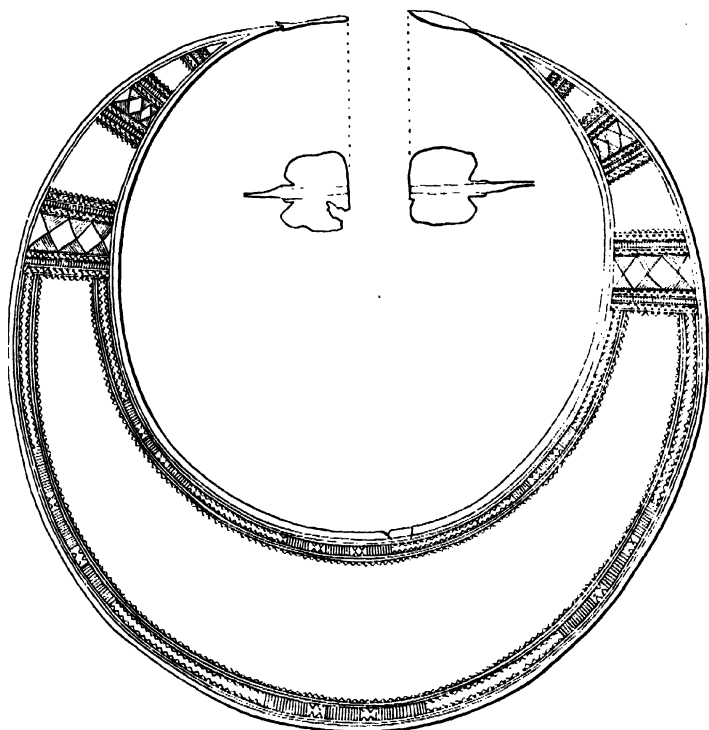


FIG. 2. Irish Gold Crescent belonging to the Royal Institution of Cornwall ($\frac{1}{2}$).

Hennet. After the death of one brother, the other sold it in 1866 to the late Mr. E. J. Hurdon, a chemist at Camelford, for its weight in gold coin, and shortly afterwards Mr. Hurdon sold it to Mr. J. D. Cook for £50. Its weight is 2 oz. 5 gr. and the diameter is 8 in., the opening being $5\frac{1}{2}$ in. across.

It is a fine specimen, complete and well preserved, with the same dimensions as no. 38 in the Dublin catalogue (pl. vii, no. 34), which has very similar ornament but weighs 6 dwt. less. The latter was found in a rock-fissure below the surface at Lisanover, near Bawnboy, co. Cavan, in 1908.

This welcome exhibition prompted a further inquiry into the meaning of this important group of antiquities, and it will be unnecessary to repeat what is already familiar. An important paper by M. Salomon Reinach, Hon. F.S.A.,¹ put the matter in a new light, and confirmed the Irish origin of all in north-west Europe; but the religious aspect, first discussed by M. Camille Jullian,² has interesting possibilities, and what follows may rank as evidence in favour of that view.

It was observed long ago, says Ignaz Goldziher (*Mythology among the Hebrews*, 72), that wherever sun-worship exists, moon-worship also is always to be found, being a residuum of the earlier stage of religion; but not in the reverse order. Authorities seem to agree that the moon was worshipped at the nomadic stage of civilization, and the sun at the agricultural stage. Agriculture is supposed to have been introduced into north-west Europe at the same time as the fashion of building dolmens (about 3000 B.C.); and if the Irish crescents be taken as lunar symbols—the most obvious interpretation—they represented in the Early Bronze Age a cult that dated back at least a thousand years, and was by that time a mere survival.

In recent years a series of discoveries have confirmed the existence of sun-discs in the British Isles, dating from about 1200 B.C. and indicating a religious change on the approved lines. This is a subsidiary argument for placing the crescents in the opening centuries of the Bronze Age.

Their ornamentation tells the same tale. Though geometric patterns are widespread and belong to various periods, it is significant that the motives occur on the beakers or earliest ware of the Bronze Age, and may be recognized in Lord Abercromby's first volume on the subject, plates xxiii-xxviii. The beaker, however, is almost unknown in Ireland, and it must therefore be inferred that the goldsmiths of Ireland and the potters of the beaker-people derived their decorative style from the same source, though they perhaps never came into contact with each other. It is interesting to note that M. Louis Siret (*Chronologie et Ethnographie Ibériques*, i, 225, fig. 70) compares the decoration of Irish crescents with that of Spanish pottery (beaker period).

Except for a narrow border on both edges, the decoration is confined to the pointed ends of the crescent, and the middle portion is left quite plain. This may possibly indicate artistic restraint, but is equally opposed to the collar and diadem theories,

¹ *Revue Celtique*, 1900, 95-7, 166-75, cf. 1892, 194, for his view that Druidism was pre-Celtic.

² *Journal des Savants* (Bordeaux), 1911, 153.

which would lead us to expect ornament in the middle, not at the ends, which would be hidden by the hair in either case.

Taken at their face value, the crescents represent the moon ; and their decoration, both in character and distribution, recalls a series of stone and pottery antiquities found in Swiss lake-dwellings and dating from the later Bronze Age.¹ The suggestion of a connexion between them is now found to have been anticipated by G. von Escher von Bergin, 1853 (*Mit. der antiq. Gesell. Zürich*, vii, 101, pl. i, figs. 1, 3), but no explanation seems to have been given of the restriction of ornament to the points. Some of the Swiss specimens (as fig. 3) agree with the crescents in this respect, and the reason may be found in the close connexion between moon-worship and the sacrifice of bulls. The

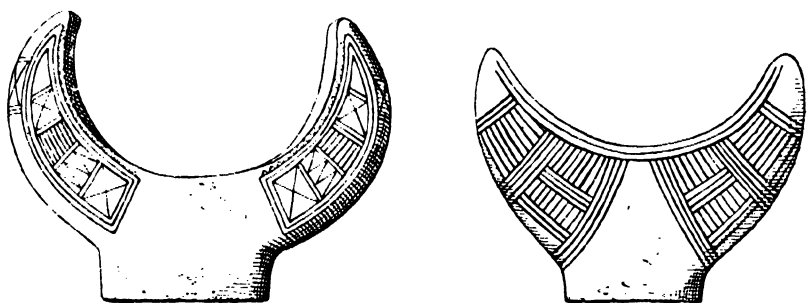


Fig. 2. Stone and Pottery Crescents from Swiss Lake-dwellings.

horns are not only separated by the forehead, but would most frequently be ornamented with metal caps or gilding. Déchelette connected the Swiss crescents with the sacred horns of ancient Crete ; and a fairly close parallel is illustrated by Sir Arthur Evans from the Idaean cave at Patso (*Mycenaean Tree and Pillar Cult*, in *Jour. Hellenic Soc.*, xxi (1901), 136, fig. 19), though in this case there is the stump of a pillar rising from the middle, between the horns.

The connexion between the crescent moon and the bull's horns may be taken for granted, but it is difficult to determine cause and effect in this case. Tschumi (*Vorgeschichtliche Mondbilder und Feuerböcke*, p. 20 ; appendix to Report of Berne Historical Museum, 1911) quotes an opinion that Bronze Age man saw in the crescent moon a glowing bull's head rather than the moon in a bull's head. Sir Arthur Evans also states that the biblical

¹ Discussed in Dr. A. Schenk's *La Suisse préhistorique* (1912), 324, with references. See also Déchelette in *Revue archéologique*, 1908, 301, and his *Manuel*, ii, 472 ; and illustrations in Keller's *Lake-dwellings*, pl. xxxvii, lxxx, lxxxi, xc, and cxlv.

'horns of the altar' were no longer the actual horns of the victim, being of the same wood as the altar itself, in this respect standing to the original in the same secondary and symbolic relation as those of their Mycenaean equivalent.

On this theory the familiar passage in Pliny (*Nat. Hist.* xvi, § 249-51) has a new significance, and not only reveals the Druids as moon-worshippers, but suggests that their religion was born, as it certainly died, in Ireland. Dr. Rice Holmes (*Ancient Britain*, 115) says 'the belief has long been growing that Druidism was of non-Celtic and neolithic origin; but our knowledge of it is confined to the period when it was a Celtic institution'. Caesar (*Bell. Gall.*, vi, 18) records that the Gauls reckoned time by nights instead of days (as in Genesis i), and in the time of Pliny (died A.D. 79) the Gaulish Druids had sunk to the position of medicine-men, one of their principal remedies being the mistletoe, which was cut by a Druid with a golden sickle on the sixth day of the moon. He was clothed in white for the occasion, and sacrificed two white bulls, afterwards making a potion of the mistletoe. The moon would still be horned, approaching the semicircle or first quarter, and visible in the evening; the bulls' horns as well as the leaves of the plant (fig. 4) symbolized the moon; and the golden sickle, if not a misinterpretation of the ceremony, may well have been a belated representative of the Irish crescent, turned from a likeness of the deity into a cutting implement of doubtful efficiency.

A bronze object (fig. 5), hitherto unexplained, may be a later development of the crescent, and in technique foreshadows the torcs of the later Bronze Age. It was found with the skeleton of a tall man in a primary burial below a barrow at Wilsford (Hoare, *Ancient Wills.*, i, 209, pl. xxix), and may have been attached by the rivets to a pole for use as a standard, though the chain attached to the centre points rather to its use in an inverted position, like the crescent amulets described by Sir William Ridgeway (*Journ. Royal Anthropol. Inst.*, xxxviii, 241), but in this case the chain may have served to hang up the standard. Its date is clear from the flanged celt and stone axe-hammer (*Archaeologia*, xliii, 411, fig. 97) found with it, and the large tusk of a boar may have formed part of a lunar emblem.

This in its turn suggests a connexion with the lucky horse-shoe on a house-door; and the pottery crescents of Switzerland are supposed by some to have been used in this way as talismans.¹ Provided with a base, they were evidently intended to

¹ A jadeite pendant of similar form, from La Buisse, Isère, is figured in de Mortillet's *Musée préhistorique*, 2nd edition, no. 774.

stand, and in this respect throw no light on the method of handling the gold crescents, one of which was found in a wooden case, and may have always been displayed in that manner to devotees. It is difficult to believe they were actually attached to wood or other material, and the square or rounded terminals (turned at right angles to the plane of the crescent) are not well adapted for suspension. An explanation will probably be found, but it may be remarked that these plates eliminate the danger of

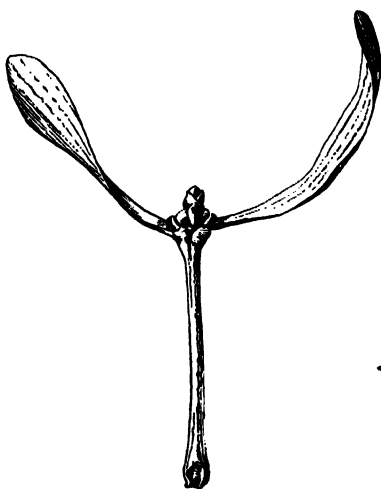


Fig. 4. Leaves of the Mistletoe.



Fig. 5. Bronze from a barrow, Wilsford, Wilts. ($\frac{1}{2}$).

sharp points, and would themselves be barely visible in a front view of the crescent (see fig. 2).

If moon-worship and the gold crescents were not indigenous, they are more likely to have reached Ireland from the south than from Britain. A possible link with the Spanish peninsula in the Early Bronze Age or even the Copper Age¹ is the *betyl* or limestone pillar ornamented with a crescent found at Palmella, near Lisbon (cast in British Museum), and illustrated in Cartailhac's *Âges préhistoriques de l'Espagne et du Portugal*, p. 136; also by Louis Siret in *Revue préhistorique*, 1908, 199. A symbolic moon

¹ Assigned to Early Aeneolithic (B) by Dr. Schulten, *Hispania* (1920).

is sometimes found in the Aegean area, but is distinctly oriental in character, and was an abomination to the Hebrews. Their priests and prophets forbade the worship of the Queen of Heaven, and Job considered it blasphemous (xxxix, 26-8); even the 'little moons' from the necks of the Midianites' camels, plundered by Gideon, played havoc with the faith of Israel (Judges viii, 21-7). On account of its pagan associations even the mistletoe was under a ban till the Reformation.

Further discoveries in the East may turn these scattered links into a chain of evidence; but at present Spain, in spite of its beakers, seems most likely to have been the intermediary,¹ and M. Salomon Reinach has drawn attention to the fact that flint arrow-heads of lozenge form, polished on both faces, are confined to Ireland and the Peninsula. These would date from the Late Neolithic Period when the dolmen idea reached Ireland. And if the megalithic tomb was of oriental origin, perhaps the worship of the moon was introduced into Ireland by the same route and by the same seafaring people.

DISCUSSION

Mr. PRAETORIUS considered the specimen from the north of Ireland an elaborate piece of goldsmith's work. The bubbles produced in casting the metal were still visible, and it was evident that the pitch bed for hammering out the gold was already in use. It was admitted that the craftsman was an expert with the punch, but could the use of a graver also be proved? The lines appeared to be scratched, and he doubted whether the pure line of the graver dated from the Bronze Age.

Mr. LEEDS said no explanation had been given of the discovery of lunettes in burials, and inquired the sex of the cases known. Statuettes of women were found abroad (as in Spain and Asia Minor) with what looked like a nimbus behind the head, and he suggested that the lunette was part of a woman's head-dress, the terminal lobes being fastened in the hair for security. The gorget theory was inadmissible; but worn as a diadem the lunette would be entirely visible.

Mr. SMITH replied that the sex of the St. Juliot skeleton was unknown; but if the lunettes were in any way connected with the moon, it should be remembered that a gold sun-disc had been found in a sepulchral cist on Lansdown Links,² near Bath, and religious

¹ M. Louis Siret (op. cit., pp. 429-38) gives reasons for regarding Druidism as of oriental origin; see also Dr. J. A. MacCulloch's article on Druids in Hastings's *Encyclopaedia of Religion and Ethics*.

² *Proc. Soc. Ant.*, xx, 254; Bath Field Club, 1906.

emblems had never been out of place in burials. The diadem theory had been rejected by recent writers.

The PRESIDENT said that the exhibition had, like many others, had interesting developments, and the archaeologist could easily find in the lunettes more points worthy of discussion; for instance the abundance of gold at that time in Ireland and the absence of silver. M. Salomon Reinach held that the metal was largely produced in Ireland. His own impression was that the ornamentation was done with a sharp point under extreme pressure, and not engraved in the true sense of the word. Thanks were due to the Master and Wardens of the Drapers Company and to the Royal Institution of Cornwall for lending such interesting antiquities, and to Mr. Smith for elucidating the problems involved.

Notes

Keeper of the King's Armouries.—Mr. F. A. Harman Oates, F.S.A., has been appointed to succeed the late Sir Guy Laking, F.S.A., as Keeper of the King's Armouries.

The late Mr. A. L. Lewis.—When ancient stone monuments were under discussion, Mr. A. L. Lewis frequently attended the meetings of the Society of Antiquaries, and on more than one occasion spoke on his favourite subject. His death on 22nd October 1920, at the age of 78, removes a serious student of our past, and a venerable member of the Royal Anthropological Institute, which he joined in 1866. Two years later, at the first International Prehistoric Congress (held at Norwich and London), he read a paper 'on certain Druidic monuments in Berkshire', illustrated by plans of Wayland's Smithy and the Sarsen stones at Ashdown House; and in later years his zealous participation in the annual congresses of the Prehistoric Society of France earned him a decoration from the Republic. It is hoped that full use will be made of his memoranda on British megalithic monuments.

Margaret Stokes Lectures.—The Margaret Stokes lectures were this year given in Dublin by Mr. E. C. R. Armstrong, F.S.A. The subject chosen was typology, or the application of the principles of evolution to certain groups of antiquities in order to demonstrate successive changes in form and ornamentation, and so to furnish evidence of date in the absence of other indications.

Munro Lectures.—The Munro lectures for this year were arranged to be given in French by the Abbé Breuil, Hon. LL.D., Cantab., on ten dates between 14th and 25th February, at the University New Buildings, Edinburgh, the title being *L'Art paléolithique et néolithique*. The subjects chosen were the Aurignac, Solutré, and La Madeleine stages of the palaeolithic Cave period, the cave-paintings and wall-engravings of France and Spain, the cultures of Mas-d'Azil, Maglemose, and Tardenois, and the art of the French dolmens and Irish megalithic monuments.

Celtic Remains in the Mendips.—At a recent meeting of the Royal Anthropological Institute, an account was given by Mr. L. S. Palmer of the exploration, by the University of Bristol Speleological Society, of a cave in the Mendips, inhabited at some time between 400 B. C. and the beginning of the present era by a tribe of early British settlers of the same race (the Brythons) as those who built the Glastonbury Lake Village and inhabited Wookey Hole and Worlebury camp. A unique feature is that there is no evidence of earlier or of Roman occupation. The evidence for the Brythonic occupation takes the form of pottery, iron and bronze objects, worked bone and stone, all of typical Late Celtic types. All the finds were deposited on the surface, in most cases covered with a thin layer of stalagmite, or in a thin black band of mud. The most interesting discoveries consisted of bronze hub-bands of chariot wheels, bronze bracelets and finger rings, iron shackles, and a piece of a currency bar. The pottery is

comparable with most Late Celtic ware, although the characteristic curvilinear motives are absent. Only three human bones were found. The general conclusion is that the cave was used as a temporary place of refuge during the first half of the Early Iron Age.

Plateau finds at Ipswich.—As the late Mr. Worthington Smith's discoveries on the Chilterns have been published by the Society (*Archaeologia*, lxxvii, 49, and *Proc. Soc. Ant.*, xxxi, 40), mention may be made of a parallel find at Ipswich on two plots of ground acquired for exploration by Miss Nina Layard and Mr. Reginald Smith. The report appears in *Proceedings of the Geologists' Association*, vol. xxxii, p. 1, with sections of the pit and illustrations of the best implements discovered. All are of late Drift type, and a fine ovate with twisted sides evidently belongs to a late stage of St. Acheul. Excavations were carried out with the aid of a grant from the Percy Sladen Trustees, and showed that the implements came from brick-earth under gravel, the latter being contorted along the east side of the pit. Previous borings had revealed a boulder-clay deep below the brick-earth, and the conclusion reached was that the industry was interglacial and contemporary with the bulk of the Caddington flints. The site is an isolated part of the plateau east of Ipswich, between the main and lateral valleys of the Gipping and Deben and 120 ft. above sea-level. There is now additional evidence that the contorted gravel is of Le Moustier date and corresponds to the chalky boulder-clay which terminates in an east and west line only a mile to the north.

Roman Standard and Chair.—The two items described as a Roman standard of the 9th Legion and a Roman general's camp-chair did not together fetch more than £200 at auction on 7th December 1920. The former is published in Daremberg and Saglio's *Dictionnaire des Antiquités*, iv, p. 1313, fig. 6419 (where it is erroneously said to be in the Cinquantenaire Museum at Brussels); and reference is also made to Babelon's *Traité* (1901), i, 669; *Bulletin de la Société nationale des Antiquaires de France*, 1901, 168; and *Rivista Italiana di Numismatica*, 1912, 35. Both were included without locality in the W. H. Forman sale at Sotheby's in 1899-1900.

Roman Burials in Kent.—During the construction of a saw-mill at Ospringe, between the railway and Watling Street, west of Faversham, several burials of the Roman period were discovered in the brick-earth and preserved by Mr. William Whiting, one of the owners of the mill. The site was twice inspected by two members of the Society, and with a grant from the Council the excavation was extended in the hope of further finds. Two more groups of sepulchral pottery were thus discovered, and most of the series seems to date from the second century, before cremation went out of fashion. Careful measurements and drawings have been made, and a fuller report may be expected on the cemetery, which had an obvious relation to the Roman road.

Palaeolithic Portraits.—The human portraits of palaeolithic date from a French cave recently announced, especially in the English press, are not a new discovery, but have been published by Dr. Lucien Mayet and M. Jean Pissot, who made the discovery in the rock-shelter

called La Colombière, near Poncin, Ain. The chief engraving represents a man on his back with right hand raised, and the headless body of a woman standing. The subject was revived by a lecture in France, and was treated as a new discovery by one of the reporters present; but an account of the find was given in the *Illustrated London News* of 1st November 1913.

The Piltdown Skull.—In the December issue of *L'Anthropologie* (XXX, p. 394) Professor Boule of Paris, who communicated a paper on the skull and jaw of Piltdown to the French Institute of Anthropology, is reported as follows: The skull differs in no important point from that of modern man; the mandible, on the other hand, is that of a chimpanzee. *Eoanthropus* is therefore a composite being. This opinion was at first expressed with some reserve, but after the labours of the American mammal experts, Messrs. Miller and Gregory, the question seems definitely settled on these lines. The fragments of skull are certainly ancient, but it is difficult to fix their geological date, because the bed in which they were found is quite superficial, and may have been disturbed at various periods. Further details may be found in his recent volume, *Les Hommes fossiles: éléments de paléontologie humaine*.

Cissbury Camp.—It is good news for archæologists that the National Trust for Places of Historic Interest or Natural Beauty is in treaty for the purchase of Cissbury, the well-known entrenchment on the South Downs three miles north of Worthing, that several excavations since General Pitt-Rivers's first attempt in 1867 have shown to be rich in relics of the Stone Age. In view of recent developments elsewhere, it is felt that further investigation of this site would be of interest, and it may be anticipated that under the new control excavation will be strictly regulated but not forbidden. The earth-works have been proved later than the flint-mines, but how much later is a question that only the spade can decide. This beautiful stretch of down, 600 ft. above the sea, can be acquired in the public interest for £2,000, and it is hoped that Fellows of this Society as well as readers of the *Journal* will signify their approval of the scheme by sending subscriptions to the Secretary, National Trust, 25 Victoria Street, S.W. 1.

Excavations at St. Albans Abbey.—During the autumn of last year excavations on the site of the chapter-house of St. Albans Abbey were undertaken in the Dean's garden by the St. Albans and Herts. Architectural and Archæological Society. It is known from the *Gesta Abbatum Sancti Albani* that the chapter-house built by Paul de Caen, the first Norman abbot (1077–93), was rebuilt by Robert de Gorham (1151–66). This building was repaired by John de Wheat-hampstead in his second abbacy (1452–65), and the work was continued by William Wallingford (1476–92), who spent very large sums upon it. The chapter-house was in the usual position on the east side of the cloister, south of the south transept. A portion of the west wall was found under the western boundary wall of the Deanery garden, and the western part of the south wall, showing a well-cut flint face and

evidence of a blocked doorway, was uncovered, but the eastern part of this wall appears to have been grubbed up. Unfortunately the position of the carriage drive prevented the exploration of the eastern part of the building, and consequently its length could not be ascertained. The north wall is known to be under the pathway on the south side of the slype, so that the interior width of the chapter-house can be given as about 30 ft. The floor at the west end of the building, at some time possibly in the thirteenth century, was raised about 15 in. The lower floor was of Roman bricks and thin tiles which probably formed the bed for Robert de Gorham's paving tiles, but the later floor above was discovered with the tiles in position. These tiles were of green glaze, with raised designs similar to those now in the presbytery of the church, which were copied from thirteenth-century examples found on that site. On the south side of the chapter-house was a passage about 2 ft. 9 in. wide between it and another building. Only a small piece of the wall of this latter building was uncovered, so that it was impossible to decide what it was. Both the inner parlour (*regulare locutorium*) built by Abbot Robert de Gorham and the chapel of St. Cuthbert were, we know, near the chapter-house. The only detail of this building brought to light was a half octagonal base of a respond towards the west end of its north wall.

The Stone Age of the Sahara.—Important discoveries in the French Sahara by MM. Keygasse and Latapie were announced in the *Revue scientifique*, 9th October 1920, and kindly communicated by M. Léon Coutil, Hon. F.S.A. A fine series of advanced St. Acheul implements was found seventeen miles south of Tebessa, corresponding to the industry at the base of the *ergéron* at St. Acheul itself and at Montières, near Amiens. A pure Le Moustier industry was collected twenty-six miles further south in the desert; and tanged implements hitherto considered neolithic were proved to be of earlier date, as end and side-scrapers occurred under 11 ft. of barren deposits at Bir-el-Ater, and the corresponding fauna was found in association elsewhere. In the Sahara the culture of Le Moustier seems to have lasted till neolithic times, whereas further north in Africa that of Aurignac had a wide extension and eventually influenced Europe. Specimens of Solutré type seem to be derived direct from St. Acheul forms, without the intervention of Le Moustier or Aurignac, and have not been hitherto acknowledged in the Sahara.

Excavation of Tell el Amarna.—The Egypt Exploration Fund has now changed its title to the Egypt Exploration Society, and has taken up anew after the War its task of excavating the remains of Ancient Egypt and of publishing the results. The last excavation undertaken before the War was that of the Osireion at Abydos, which is not yet completed. But its continuation is postponed for the present, and the Society has deemed it wiser to turn its attention to another site which promises more important and speedy results. The German work at Tell el Amarna, which had produced results of the highest value, is necessarily at an end, and the Society now proposes to carry on and complete this excavation. The interest of Tell el Amarna is great. Built by Akhenaten, the heretic king, it was first excavated by

Professor Petrie in 1891, who was attracted to the site by the discovery in 1887 of the famous cuneiform tablets, containing the dispatches of the king and of his father Amenhetep III to the governors and princes of Palestine and Syria, during the time when the Hittite king Shebbiluliuma was extending his influence over northern Syria, and the nomad tribes of the Khabiri were bringing anarchy into the Egyptian dominion in Asia. That these Khabiri were possibly the Hebrews, the Israelites themselves in process of taking possession of the Promised Land, adds enormously to the interest of this epoch-making discovery of the tablets. Professor Petrie discovered a few more of these tablets, and at least one other came to light during the German excavations. That more may come to light to supplement the story unfolded by the decipherment of these tablets and of the others found at Boghaz Keui in Anatolia, is one of the hopes that has led the Egypt Exploration Society to el Amarna.

To those, too, who are interested in the history of religious thought, the excavation of the city of Akhenaten, the first monotheist in the history of the world, should also appeal deeply, for it is possible that the worship of the Aten may have had an influence upon the later development of Jewish monotheism. More immediate results may undoubtedly be looked for in the discovery of works of art of the school of Akhenaten, such as have been found in rich measure during the German excavations, which have rescued from oblivion some of its finer and more interesting productions. It is hoped, too, that further evidence may be found of the connexion between Egypt and Minoan or Mycenaean Greece at this time, the middle of the fourteenth century B. C. Sherds of Greek and Cypriote pottery of late Minoan III style were found by Professor Petrie at el Amarna, and at Enkomi in Cyprus rich treasures of imported Egyptian art of the time of Amenhetep III were discovered. Mycenae and Rhodes have also produced imported Egyptian objects of their time, and it is hoped to find at el Amarna, as did Professor Petrie, traces of Mycenaean art and evidences of Greek influence on Akhenaten's craftsmen. Finally, in the domain of architecture our knowledge has been greatly increased by the German excavations, and it is hoped that results just as important may be obtained.

The excavations will be directed by Professor T. E. Peet, assisted by Mr. A. G. K. Hayter, F.S.A., and Mr. F. G. Newton; and Professor Whitlemore, representing the American subscribers, will accompany the expedition. The Egypt Exploration Society is surely justified in thinking that this work is one that must appeal greatly to all, and confidently asks for the monetary support without which the work cannot be carried on as it could wish. Subscriptions and donations should be sent to the Honorary Treasurer, Warren R. Dawson, at the Society's rooms, 13 Tavistock Square, W.C. 1.

Obituary Notice

George Clinch.—The sudden death, on 2nd February, of Mr. George Clinch, the Society's clerk and librarian, within a few days of his sixty-first birthday, came as a sad blow to his many friends within and without the Society of Antiquaries. He was at his work and apparently in his usual health on the Tuesday, but on the Wednesday morning he was taken suddenly ill on his way to the station and died within a few hours.

George Clinch was born on 9th February 1860 at Borden in Kent, and while yet a small boy began to show that interest in archaeology which never left him, by collecting flint implements in the fields around his father's house. After leaving school he obtained an appointment in the library of the British Museum, and during this time found the opportunity of writing several books on London topography, including works on Bloomsbury and St. Giles, Marylebone and St. Pancras, and Mayfair and Belgravia. He also at this time made two communications to the Society, on stone implements from West Wickham and on pit-dwellings at Hayes, Kent, both of which were published in *Proceedings*. On 16th December 1895 he was appointed clerk to the Society on the resignation of Mr. Ireland, and in 1910 the Council added the title of librarian to his office in recognition of his increasing responsibilities and valuable services.

As an antiquary he gave especial attention to prehistoric archaeology, and many of the articles on this subject in the Victoria County Histories were from his pen. As a Kentish man he was naturally keenly interested in the antiquities of his native county, on which subject he wrote many books and papers, included among them being works on Bromley, Hayes, and Keston, on Bromley and the Bromley district, and the *Little Guide to Kent*, and as a member of the Kent Archaeological Society he had contributed papers to *Archaeologia Cantiana*. He had also written books on English costume, on old English churches, and on English coast defences. He was a Fellow of the Geological Society and of the Society of Antiquaries of Scotland, and was an active member of the London Survey Committee. In addition he had served as chairman of the Council of the Association of Men of Kent and Kentish Men.

To the Society of Antiquaries during his twenty-five years' service he always showed a great and loyal devotion, and had endeared himself to the Fellows by his ready courtesy and geniality. He was ever willing to help Fellows in their work to the utmost of his ability, and his thorough knowledge of the library and of the subject-matter of its contents was always at the service of inquirers. He will long be held in affectionate remembrance by all those, and they were many, with whom his official duties brought him into contact.

Reviews

The Church of Our Lady of the Hundred Gates (Panagia Hekatonapyliani) in Paros. By H. H. JEWELL and F. W. HASLUCK. London: Macmillan, on behalf of the Byzantine Research Fund, 1920. 15 x 11. Pp. 78, with 14 plates and 56 illustrations in the text. 50s.

Just outside the capital of the island of Paros, within an enclosing wall, stands the Church of the Virgin, the most important in this Ægean island. As shown in the photographs, it is a fascinating group of snow-white walls, domes, and bell-turrets, to which a tall feathery palm gives contrast and grace.

The account of the complex of buildings within the enclosure, by Mr. H. H. Jewell and the late Mr. F. W. Hasluck, is admirably clear and well illustrated. Mr. Hasluck's share of the work must be almost the last contribution of this fine and generous scholar to the studies in which he was so accomplished a master.

The buildings are from some points of view of secondary rank, but their completeness and early date give them exceptional interest. Besides the great church there are a smaller attached church, a baptistery like a third church, chapels, cloister, and cells. The smaller church had a basilican plan, but was completed above with a dome; it is suggested that this was a later, but not much later, alteration. The plan, it may be mentioned, only slightly differs from that of our own remarkable early Christian church at Silchester.¹

The plan of the great church is cruciform, with aisles to the nave opening from the narthex and continuing all round the transepts and having galleries above. This very fine type of plan, as the authors remark, was doubtless derived from that of the Holy Apostles at Constantinople; the selection of such a form suggests that the Parian building was itself on a holy site or a grave-church. There is indeed under the altar a tiny crypt which 'is said to be a miraculous well: the form of the chamber, however, suggests that it was originally designed as a shrine'. On the south side of the bema is an important diaconicon, a complete chapel with apse and vestibule; it has a side-door from the bema exactly on the transverse axis of the altar. On the other side of the bema, in the same line, is a second side-door (now blocked) which entered the older and smaller church. This church, or part of it, must, after the building of the greater edifice, have served as its prothesis until at some late time the door was blocked and a separate little ciborium was set up against the north jamb of the apse. Doubtless this alteration was a consequence of the occupation of the little old church for the Latin rite during the Venetian occu-

¹ For a still closer resemblance to Silchester see the plan of an early Greek church illustrated in a recent number of the Athenian *Ephemeris*. May I suggest here that it would be a really valuable piece of historical realization to build a restored version of the little Silchester church in any place where a small memorial chapel may be required?

pation (see p. 5). The absence of a special prothesis is made a point of in the suggested dating of the church, and it is assigned to the reign of Justinian; but if my reading is right the reasoning would hardly apply. Mr. Hasluck says, 'In later churches, which, if of considerable size, have three apses, the Elements are prepared in the north lateral apse, which for this reason takes the name of *prothesis*' (p. 43). 'It will be noticed that the attribution of the church to Justinian is in conformity with Dr. Freshfield's canon that triapsidal churches are later than the reign of Justin II' (*Archaeologia*, xlv, 383). My own impression, I may say, is that the great church is later than the high moment of the Byzantine culmination—there is dryness and hardness in the details, with the exception of the capitals of the great ciborium, which it is admitted were importations and which moreover had been prepared for another structure. The monogram medallions also seem to me to be further developed than they were in Justinian's time. I should guess the seventh century as the date of the great church, and the smaller side-church need not be much earlier than the other—perhaps the first work of a continuous scheme of building. That such details as the moulded door-frames and the impost capitals of the gallery of the small church should belong to the fifth century seems to me next to impossible. The high proportion of the interior and of the section of the dome of the great church, with the tall windows around the springing, and the perfect form of the pendentives, all point to a later date than that suggested by the authors—'contemporary with the Holy Apostles'. The special distinction of the church at Paros is the preservation within the several buildings of most important early examples of the greater 'fittings'—altar, ciborium, screen, patriarch's throne, and the great font, all apparently of the date of the buildings. Paros in this respect is probably the most perfect example of Byzantine churches. The altar ciborium has four large columns with slabs cut to arch-forms resting on them; other slabs are laid on these horizontally, cut internally to a circular form; above these, again, rose a fluted dome of thin marble; of this only fragments remain, but it was probably put together in 'gores'. It is large in scale, delightfully frank in construction, and truly beautiful. As Mr. Hasluck remarks, 'the ciborium at Paros is probably unique in Greece'. The screen was a row of four similar columns, with dado slabs across the lower part of the intervals excepting at the central door; the enclosing slabs were charged with crosses in relief and monograms in discs. The apse was surrounded by rising tiers of marble benches, with the archbishop's chair at the back in the centre and two other special, but inferior, seats, one on either hand. The font occupied the eastern space in front of the apse of the small church-like baptistery, which had a little dome over its nave. The basin was a cross in plan, of considerable size, and formed of carved slabs mitred at the angles; in two of the arms were descending steps and in the centre was a short column, standing loosely, on which a lamp was placed. Such cruciform fonts are known elsewhere: the idea of baptism in the cross is impressive.

Many antique Greek fragments were used in the buildings. A complete doorway of elegant work is thus reused, and over the central

door of the church was a moulding carved with two rows of elegant 'egg and tongue'. If Mr. Jewell has fuller details of these it might be well to record them. Two marble slabs carved with figures are mentioned which 'appear to be parts of a coffered ceiling of Graeco-Roman date'.

The church is almost entirely built of the fair Paros marble, but, notwithstanding, it seems always to have been whitewashed—'the external wall faces are covered with successive coats of whitewash which are now more than an inch thick'. Those who seek for authority for the use of limewash on ancient buildings will hardly find it any thicker than this.

W. R. LETHABY.

The British Academy Records of the Social and Economic History of England and Wales. Volume iv. I. *A Terrier of Fleet, Lincolnshire.* Edited by Miss N. NEILSON, Ph.D. II. *An Eleventh-Century Inquisition of St. Augustine's, Canterbury.* By the late ADOLPHUS BALLARD, M.A., LL.B. London: published for the British Academy by Humphrey Milford, Oxford University Press, 1920. 10 x 6½; Pp. lxviii + 214; xxviii + 33.

As to the value of such texts as these to the present-day economist there can be no two opinions. In the first and larger of the two parts of this volume Miss Neilson gives us the text of a document dating from the early fourteenth century, now in the British Museum, and in a long introduction sketches for us the material it contains for establishing early medieval practice with regard to commoning and intercommoning by neighbouring vill in places where the existence of great stretches of waste may naturally be expected to introduce certain modifications and special customs into the normal economy of the medieval manor. From this point of view the particular district here concerned (the fenland of Lincolnshire and the adjacent counties) has points in common with such districts as Dartmoor; but its natural features give it in addition certain characteristics which are peculiar to itself, such as the measures taken to prevent the 'drowning' of the more valuable land by sea or by the choked and overflowing rivers, and their effects upon local custom.

To the last-mentioned points Miss Neilson gives some pages. We notice here in passing that she has not seen or does not agree with Mr. Richardson's ascription of the fully formed Sewers' Commission to the end of the reign of Henry III.² She is, however, more interested in the subject of intercommoning, to which she devotes the bulk of her introduction and a large and very elaborate map. Dealing first with fenland north of the Welland, and then with the districts south and east of it, she finally passes to consider in more detail the vill of Fleet itself, for which purpose we are supplied with a second map. We could wish, by the way, that the Academy had economized on something else (these volumes are very sumptuously produced) and given us the maps in a form in which they would not tear and could be inspected without closing the text. The introduction concludes with

² Royal Commission on Public Records, *Second Report*, ii, p. 98.

a short description of the manuscript and a necessary history of the family of de Multone, whose career is much involved in the interpretation of certain parts of the Terrier: particularly (Miss Neilson thinks) the awkward marginals in its earlier part.

Miss Neilson is very much on her own ground in most of this introduction. If we may venture a criticism we would say that we have not found it altogether easy reading. It is not reasonable, of course, to look for too much simplicity in such a case, and we should be ungrateful if we did not rather extol the editor's accuracy, her abundant reference to authorities, and her obvious combination of a deep study of her materials with a carefully compiled modern knowledge of the district she describes. Such a work as this is not, of course, for the general reader. At the same time it is intended, we presume, to be intelligible to the average reader of medieval texts, and the present reviewer, if he may claim that position, would confess that he had occasion to verify his interpretation of certain words in the introduction by more than one reference to Neilson on *Customary Rents* and similar authorities. If we allude to this small point it is because we think that the medievalist at present is a little prone to overdo his fear of reiterating what he himself knows very well. Some of us would very much regret it if the young medievalist, a student already much handicapped, were to be deterred by avoidable difficulties.

In the second part of the volume we have the results of a careful examination by the late Mr. Adolphus Ballard of the Domesday statistics printed in Larking's edition of the Kent Domesday from the Cartulary of St. Augustine's, Canterbury, now at the Public Record Office. Mr. Ballard concluded that we have here a copy made in the thirteenth century of another copy made between 1100 and 1154 (possibly about 1124) of an independent compilation made about 1087 from the original returns out of which Domesday itself was put together. By a series of tabular statements he showed that it displays characteristics—a greater local knowledge, a better acquaintance with English names, and so forth—similar to those other compilations from the original returns which we already know from the work of Dr. Round and others (the Cambridge and Ely inquests). The object of compilation, as is pointed out in a passage containing an interesting parallel drawn from present-day administration, was to supply the abbey with a copy of the assessment by means of which it could check the demands of the royal officials. As Mr. Ballard's 'Excerpts' contain certain statistics for the monastery of Holy Trinity, he was able to add to his text in certain parts a third column of parallel passages taken from the *Domesday Monachorum* in the possession of the Dean and Chapter of Canterbury, which he concluded to have been again an independent compilation from the Domesday returns; adding (a new point) that it was so compiled a year after the visit of the commissioners to the county of Kent.

In the second as in the first part of this volume we have the editor speaking with assurance on a subject peculiarly his own, and there is little to be said in criticism of what seems to us a lucid and convincing statement. We should like, however, in conclusion, to refer to a matter common to both parts, the treatment of the texts as such.

If we venture on a certain measure of criticism at this point it should be understood as applying quite as much to the responsible body which produces this volume as to the individual editors. We notice, in effect, a continuance here of the fault which has marred the work of every authority which since the beginning of the last century has set itself to publish medieval texts: that is an unfair preponderance of interest in the subject-matter, the *causa movens* of the publication, in contrast to the text itself. The early nineteenth century considered little except the interests of the genealogist and topographer: in our time the economic element is uppermost. In both cases the publishers seem to forget that other students besides the genealogist and the economist may wish to consult their texts, not only now but in the future: at any rate they show no inclination to enforce systematic rules of textual criticism.

We have little space to illustrate this, and a few examples must suffice. Miss Neilson has obviously been at pains to construct a careful text: she gives us many foot-notes with variant readings and the like and encloses in square brackets what (we believe: we are nowhere told) represents her own comment or modification on the original. Yet we get *disseiseurunt* (p. 153) and *disseiserunt* (p. 156); *Donington* and *Donington* (p. 156: the original has *Donington* in both cases); *communia* (p. 157) and *communa* (p. 153); and the like; all without comment. These are small matters, but they show that textual accuracy has not been a primary consideration, and a rather more important result of this point of view is seen when we turn to the doubtful marginals already mentioned: it is impossible to begin any attempt at their explanation (and they are interesting) without a visit to the British Museum, because we are not even told if they are all in the same hand as that of the body of the document.

We must not labour this matter further, but only add that the second part of this volume shows again peculiarities in rendering the text: the first word quoted—*Exce(r)pta*—contains what only a visit to the MS. shows to be an addition (an incorrect one) by the editor. What is particularly noticeable is that the system of rendering the original is different in the two parts of this single volume. It is really quite time that all persons and bodies concerned in the publication of medieval texts got together to formulate, and abide by, a sound and single system of editing and criticism.

HILARY JENKINSON.

An Introduction to the Study of Terra Sigillata, treated from a chronological standpoint. By FELIX OSWALD and T. DAVIES PRYCE. London: Longmans. 10½ x 7½. Pp. xii + 286, with 85 plates. £2 2s.

A very praiseworthy attempt has been made to condense into this volume an account of the principal features of chronological value in the history of Terra sigillata. To obtain this result the authors must have studied with great care and much labour the very large number of works in many languages on their subject, as well as the reports of excavations where this pottery has been found.

As a summary of what is known of this pottery the work is excellent,

but it will not altogether satisfy the requirements of the serious archaeologist wishing to obtain the fullest details, nor will it relieve the excavator from having to refer to the works from which this volume has been compiled. For those, however, who have not made a detailed study of the ware, this book will be most instructive and helpful, and for obtaining a general idea of the date of the pottery from any particular site it will prove of considerable value. It contains much useful information set out in concise and intelligible form, such as the list of dated sites where this ware has been discovered, a summary of the various pottery sites and the periods of their activities, and a list of well-attested potters. It would have been more convenient had the latter been arranged alphabetically as a whole, rather than by periods. In fact a great addition to this work would have been a full list in tabular form of all the potters, giving provenance, date, forms used, etc., and references to the pages in the text where they are mentioned. As it is, lists of potters are continually being met with under such headings as: Well attested potters, General Description, Potter's stamps on various forms, etc., which necessarily involves a certain amount of repetition and makes the finding of information concerning any particular potter none too easy.

The authors must indeed be complimented on the way in which they have dealt with the classification of the plain forms—a by no means simple matter. The large number of plates showing the different types and their many variations are excellent, and these, together with the text giving the approximate dates, will fill a long-felt want and will undoubtedly be much used for reference. The grouping of some of the more unusual forms under definite types has been done with much success, although in a few instances, such as the inclusion of types 11 and 12, plate I, in the same class as the other examples on this plate, it is open to criticism. The difficulties that must have been encountered by the authors in assigning some examples to any particular group or type is well illustrated by the inclusion—whether intentional or unintentional—of the Pan Rock Type 8 on both plates lv and lix. The fact that there are no references given on the plates to the pages in the text, and that the plates themselves are not numbered consecutively nor in the same order as they are dealt with in the text, is unfortunate, and causes considerable difficulty in finding quickly information about any particular type—a very important point in a book of reference.

In a work of this description it is obviously impossible to deal fully with the many types of decoration on *Terra sigillata*. The authors have, however, shown great discrimination in selecting their examples of the motives and combinations of motives in use at different periods and on various forms.

The plate of types of ovolo decoration and the accompanying text is one of the best items in the book, and will be of undoubted value in dating small fragments of pottery on which this motive occurs. It would perhaps have been better if the narrow decorative bands used by some potters instead of the ovolo pattern had been treated separately and not under the heading of ovolos, which they most certainly are not; in one instance the authors even refer to an ovolo of urns!

To trace back the derivation of the ovolo, or egg-and-tongue motive, to the lotus bud decoration of the Egyptians would appear to be hardly necessary, and indeed it is a question whether the authors were well advised in spending so much time and labour in endeavouring to find the prototypes of the decorative details. In a work of this description it serves no useful purpose to trace these prototypes back for several centuries, and illustrations comparing such subjects as the Farnese Hercules with representations of that deity on Terra sigillata might with advantage have been omitted and only examples throwing some light on the dating of the pottery should have been included. The Romans were great copyists, and the Terra sigillata potters to a large extent conformed to this racial characteristic by adapting to their own purposes the subjects and designs which they must have seen daily in works of art in stone and metal.

J. P. BUSHE-FOX.

Catalogue of a Collection of Early Drawings and Pictures of London.

London: 1920. Privately printed for the Burlington Fine Arts Club. $12\frac{1}{4} \times 9\frac{1}{2}$. pp. 74, with 48 plates.

Those who remember the remarkable and interesting exhibition of Old London Drawings and Pictures at the Burlington Fine Arts Club will be glad to have this fine record. Mr. Philip Norman has contributed a Preface in which he deals briefly with old views of London. The Catalogue furnishes sufficient descriptive particulars of 115 drawings and paintings, the earliest in point of date being a rare pen-drawing by Hollar, and the latest belonging to the early years of the last century. No less than forty-eight are here reproduced. The great majority of these come either from the collection of H.M. the King or from private collections like that of Sir E. Coates. Since the originals are thus not generally accessible, all students of London history and topography will find this volume of great interest. It is needless to state that the reproductions are of fine quality. At the exhibition some select pieces of furniture with a London history were shown as a fitting accompaniment to the drawings. The most important came from the 'Old India House', and were lent by the Secretary of State for India. Other pieces were lent by various City Companies. A descriptive catalogue of them all is included in the present volume.

C. L. K.

An Inventory of the Historical Monuments in Essex; vol. i. Royal Commission on Historical Monuments. London: Stationery Office.

$10\frac{3}{4} \times 8\frac{1}{2}$. Pp. xxxvii + 430. £1 10s.

Until the Royal Commission had well started on its laborious work nobody can have had a real idea of the wealth of ancient houses which England still retains. The ancient churches were of course obvious to every one; they had been studied and described—or at any rate a vast number of them had—by many writers, they had been visited by many more or less learned societies. But the ancient houses were not so much in the public eye. The more notable ones, of course, were; but there are scores and hundreds situated in remote places, unknown save to the immediate neighbourhood, and by it regarded

merely as dwellings, old fashioned perhaps and a little more interesting than their newer neighbours, but not conveying to the minds of those acquainted with them any part of the long story of domestic architecture of which they are often valuable illustrations.

The inventories published by the Royal Commission on Historical Monuments include all these unknown houses, as well as ancient cottages, which even a student of architecture might pass by with a casual glance. In another direction equally good service is done and a meaning is given to ancient sites which, to the uninstructed eye, appear to be nothing more than mounds and hollows.

These things are all catalogued, described, and, where possible, dated without a trace of sentiment or emotion. The descriptions in an auctioneer's catalogue are vivid in comparison. But the essentials are there, and any inquirer could not do better, when visiting a district, than arm himself with the Commission's inventory and under its guidance find out for himself the treasures he seeks. There are many plans of towns and villages showing the position of every 'monument' that is recorded, also plans of all the churches and of some of the houses. There are photographs also of the most interesting and attractive of the monuments, and these include churches, houses, and cottages as well as particular features in the shape of doorways, windows, screens, pulpits, fonts, tombs, and other objects. From the Sectional Preface a good idea may be obtained of what is best worth seeing and of its connexion with the historical continuity of things. A further help in the choice of what to see may be obtained from the list of monuments especially worthy of preservation. There is an admirable index, and indeed it would be difficult to compile a better book of reference.

It is the north-west part of Essex which is dealt with in this volume, about a quarter of the whole county. Much of it is but little known to the tourist, and it is surprising what a quantity of interesting historical monuments it contains. The churches are not in the first rank, but there are many interesting features within them, and some of them date back to a time prior to the Conquest. The houses are more noteworthy, including as they do the magnificent early castle of Hedingham and the great Jacobean palace at Audley End. There are examples of domestic work of every century from the thirteenth to the eighteenth, amongst the most notable being Horham Hall, Moyns Park, Spains Hall, Broadoaks at Wimbish, and Dorewards Hall at Bocking. But these are only a few out of many good examples. The early eighteenth century, which just comes within the commissioners' terms of reference, is not particularly well represented in this part of Essex, but Quendon Hall has some features of unusual interest.

It is impossible to enter here into any detailed examination of the objects illustrated, but enough has been said to indicate the wealth of interest to be found in the district, and lovers of antiquity might do much worse than make a tour of exploration with this volume as a guide.

J. A. GOTCH.

Periodical Literature

The Journal of the Royal Anthropological Institute, vol. 50, part 1, contains two papers on archaeological subjects, Mr. J. Reid Moir writing on the occurrence of flint implements in the glacial chalky boulder-clay of Suffolk, and Dr. C. G. Seligman on bird-chariots and socketed celts in Europe and China.

The English Historical Review, vol. 86, January 1921, contains articles on the 'Alimenta' of Nerva and his successors, by Miss A. M. Ashley; on Maurice of Rievaulx, second abbot of that house, by Dr. F. M. Powicke; and on the battle of Edgehill, by Mr. Godfrey Davies. Shorter articles include a mention of scutage in 1100, by Mr. W. A. Morris; a Butler's serjeantry, by Dr. Round; the two earliest municipal charters of Coventry, by Dr. Tait; the Parliament of Lincoln in 1316, by Miss H. Johnstone; negotiations for the ransom of David Bruce in 1349, by Mr. C. Johnson, and indentures between Edward IV and Warwick the Kingmaker, by Miss C. L. Scofield.

Proceedings of the Prehistoric Society of East Anglia, vol. iii, part ii (1920). The presidential address by Professor J. E. Marr deals with Man and the Ice Age from the geological standpoint, and summarizes the evidence recently obtained in the neighbourhood of Cambridge, where conditions during the Pleistocene period seem to have been much more complicated than in the Thames valley. He recognizes four cold periods, represented in the Chillesford beds, Cromer Till, Chalky Boulder-clay, and the latest Northern Drift of Wales; the earliest being Pliocene. While accepting Mr. Reid Moir's palaeolithic finds in the boulder-clay at Ipswich, he explains the critical Hoxne section as a palaeolithic horizon between two boulder-clays, the lower being Cromer Till and the upper being Chalky Boulder-clay, since eroded. The professor is inclined to adopt Skertchly's view of the sequence east of the Fens, and has himself made famous the 'Travellers' Rest' pit, one mile north-west of Cambridge. Rev. H. G. O. Kendall, F.S.A. (now president of the Prehistoric Society) continues his comparison of flints from Avebury and Grime's Graves, and Miss Layard records a remarkable find of Pleistocene bones at Ipswich. Mr. Cox's paper on implements from glacial deposits in north Norfolk would have surprised the last generation, but the tide is turning in favour of a pre-glacial date for the Drift types of implements: indeed Mr. Reid Moir is induced, by his discoveries at Mundesley, to look for the true Chelles horizon in the Cromer Forest-bed. Mr. Derek Richardson describes a series of celt-like implements, and more especially a chalk carving from Grime's Graves; and Mr. Dewey groups together a number of celts with one common feature, which he calls a flat base; but as a celt does not stand (but lies) on its face, the normal description would be 'celts with a flat face'. Mr. Burkitt contributes two short papers, and his two pages of illustrations will do more to unravel the mysteries of the graver than his text, which contains an unfortunate misprint ('heeled' for 'keeled' on p. 310), and gives currency to 'beaked burin' as a translation of *burin*

busqued, the obvious rendering of which is 'busked graver'. The number bears witness to considerable activity in prehistoric circles; but, to do justice to the papers, the illustrations should be so arranged as to obviate excessive reduction. It may be useful to refer in conclusion to photographs (p. 209) of the bronze shield found at Sutton, Norfolk, included in the list given in *Proc. Soc. Ant.*, xxxi, 150.

Publications of the Bedfordshire Historical Record Society, vol. v, part ii. Mr. Herbert Fowler continues his Domesday notes dealing with Kenemondwick, which he identifies with an area in Sandy; Mr. Page-Turner writes on the Hillersdens of Elstow, and on Beecher of Howbury in Renhold; Mr. Hamson publishes a grant of free warren to Newnham Priory by Richard II, dated 1385, and Mr. Austin writes on Cutenho. Farley Hospital, and Kurigge. Mr. Fowler in another paper, entitled Munitions in 1224, prints documents relating to the siege of Bedford Castle, and also publishes the first of a series of studies on the Inquisitions post mortem of the county. Mr. F. G. Gurney writes on Yttingaford and the tenth-century bounds of Chalgrave and Linslade, and the Rev. A. G. Kenley publishes the Register of St. Mary's Church, Bedford, 1539-58.

The Journal of the Architectural, Archaeological, and Historical Society for the County and City of Chester, vol. 23, new series, contains papers by the Rev. F. G. Wright on Chester Blue Coat Hospital; by Mr. J. H. E. Bennett on arms and inscriptions sometime in the church of St. Bridget, Chester; by the Rev. W. F. J. Timbrell on the medieval stall-end in Hawarden parish church and contemporary panels in Eastham church, and by Mr. R. H. Linaker on the life of George Clarke, Lieutenant-Governor of New York, 1736-45. The number also contains an appreciative notice of the late Professor Haverfield, especially in connexion with his work on the walls of Chester.

Transactions of the Essex Archaeological Society, vol. 15, part 4. The Rev. G. M. Benton describes a bench end at Wendens Ambo church, with a carving illustrating the legend of the tiger and the mirror. Dr. J. H. Round, in a paper on Rayne and its church, discusses the question of the foundation and endowment of the church, and the derivation of the name of the family of Raynes; Mr. Guy Maynard and Rev. G. M. Benton write on a burial of the Early Bronze Age discovered at Berden, to which Mr. A. G. Wright and Lord Abercromby contribute appendices on beakers; Rev. W. J. Pressy contributes a paper on some lost church plate of the Colchester archdeaconry, and Dr. Round discusses the site of Camulodunum.

The Essex Review, vol. 30, January 1921, contains the first part of a translation of the accounts of ministers of St. Osyth's priory for the year ending Michaelmas 1512, preserved among the records of the Duchy of Cornwall; a paper on the custom of the foredrove, by Rev. E. Gepp; and some notes on the Liberty of Havering-atte-Bower, by Rev. Dr. Smith, and on the bells and ringing annals of Saffron Walden, with extracts from the accounts, by Rev. G. M. Benton.

Papers and Proceedings of the Hampshire Field Club, vol. 8, part 3. The Rev. C. R. Stebbing Elvin contributes some notes on the Solemn League and Covenant in England, with special reference to the parish

of Long Sutton in Hampshire; Mr. Cecil Piper writes on Stansted Park and its owners; Mr. Le Couteur on the remains of ancient painted glass in Stoke Charity church; Mr. Kidner on an unrecorded type of circular earthwork in the New Forest; Dr. Whitehead on Hampshire church bells, an attempt to identify the founders R. B. and I. H.; and Mr. W. J. Andrew on medieval relics from a mysterious interment at Winchester, the relics consisting of a silver penny of Henry III and a circular bronze medallion, probably a talisman. Mr. Craib publishes the first part of a transcription of the inventories of Church goods in Hampshire in 1549, and in the Report of the Archaeological Section there are accounts, amongst other matters, of the opening of barrows at Hayling Island and Weyhill.

Archæologia Cantiana, vol. 34, 1920. Mr. Charles Cotton continues his transcript of the churchwardens' accounts of the parish of St. Andrew, Canterbury, from 1485-1625; Mr. Arthur Hussey contributes abstracts of the wills of the parishioners of Ash next Sandwich, and Mr. Ralph Griffin writes on the Lepers' Hospital at Swainstrey. There are also papers by Mr. A. G. Little on the Grey Friars of Canterbury, on Arden of Feversham by Mr. Lionel Cust, and on the discovery of the tomb of Abbot Roger II at St. Austin's, Canterbury, by Rev. R. U. Potts. There are also printed abstracts of some Dover Deeds presented to the Mayor and Corporation by Mr. Blair.

The London Topographical Record, vol. xii. Mr. C. L. Kingsford concludes his historical notes on medieval London houses; Mr. Beresford Chancellor contributes an appreciation of Tallis's *Street Views of London*, published soon after the accession of Queen Victoria; Mr. Arthur Bolton writes on Stratford Place, and Dr. Philip Norman contributes an article on Disappearing London, illustrated by photographs taken by the late Mr. Walter Spiers.

The Collections for a History of Staffordshire, edited by the William Salt Archaeological Society, for 1920 consist of the first part of the second volume of Staffordshire Parliamentary History, by Col. Josiah C. Wedgwood, D.S.O., M.P.

Sussex Archaeological Collections, vol. 61, contains a paper, with plan, by Mr. W. D. Peckham, on the conventual buildings of Boxgrove priory; Messrs. E. C. Curwen and E. Curwen write on the Earthworks of Rewell Hill, near Arundel, with plans and sections, and Mr. Hadrian Allcroft on some tentative exploration undertaken on these earthworks. Miss M. H. Cooper publishes a perambulation of Cuckfield in 1629; Dr. F. Grayling describes Kingston-Buci church; Mr. L. J. Hodson publishes extracts from a seventeenth-century account book, and Mr. J. E. Couchman writes on neolithic spoons and bronze loops discovered in Sussex, reprinted from the *Proceedings of the Society of Antiquaries*. Mr. H. M. Whitley contributes a paper on Sanctuary in Sussex; Mr. V. J. B. Torr publishes an Elizabethan return of the state of the Diocese of Chichester, and Mr. L. F. Salzman contributes some notes on the family of Alard. In addition there is a short note on the discovery of two bronze celts at Eastbourne in 1916 and a subject-index of the papers published in vols. 51-60 of the Collections.

The Wiltshire Archaeological and Natural History Magazine, no. 133, vol. 41, December 1920, contains the concluding portion of

Archdeacon Bodington's transcript of the Church Survey in Wilts., 1649-50; the Rev. G. F. Tanner in his notes on the Rural Deaneries of Marlborough and Cricklade, 1812, prints extracts from the Rural Dean's book drawn up by the Rev. C. Francis on the revival of that office in 1811. The excavation of a late-Roman well at Cunetio (Mildenhall), near Marlborough, is reported by Mr. J. W. Brooke, and Mrs. Cunnington adds an illustrated appendix on the pottery found during the excavation.

The Yorkshire Archaeological Journal, vol. 25, part 4, contains a long, fully illustrated article, with plan, on St. Mary's church, Beverley, by Mr. John Bilson, and a transcript by Mr. William Brown, of the Register of York Castle, 1730-43, consisting mainly of a record of executions. There are also notes on Elland church and on the British remains at Hinderwell Beacon.

Vol. 26, part 1, of the same journal consists entirely of the report of the excavation of the Roman site at Slack in 1913-15 by Messrs. P. W. Wood and A. M. Woodward. The paper is completely illustrated and contains a large-scale plan of the fort.

Transactions of the East Riding Antiquarian Society, vol. 23, contains papers by Col. Saltmarshe on the river banks of Howdenshire, their construction and maintenance in ancient days, and on ancient drainage in Howdenshire. Mr. Twycross-Raines writes on Aldbrough church in Holderness, and Mr. T. Sheppard on the origin of the materials used in the manufacture of prehistoric stone weapons in East Yorkshire. Amongst the shorter notes is one on the prehistoric earthwork known as the Castles, at Swine, and one by Mr. Stevenson on an early mention of Hull in the Liberate Rolls of 1228.

The Scottish Historical Review, January 1921, contains articles on the passages of St. Malachy through Scotland, by Canon Wilson; on the jewels of Mary Queen of Scots, by Mr. J. D. Mackie; on early Orkney rentals in Scots money or in sterling, by Mr. J. S. Clouston, and on James Boswell as essayist, by Dr. J. T. T. Brown.

The Transactions of the Glasgow Archaeological Society, new series, vol. 7, pt. 2, contains a paper on James Boswell, an episode of his grand tour (1763-6), by Dr. J. T. T. Brown, the President of the Society; on some old Scots authors whose books were printed abroad, by Dr. David Murray; on Sir John Skene's MS. *Memorabilia Scotica* and Revisals of *Regiam Majestatem*, by Dr. George Neilson; on French privateers on the Galloway coast, by Mr. E. Rodger, and on the citadel of Ayr, by Mr. J. A. Morris.

Proceedings of the Royal Irish Academy, vol. 35, section C, contains two papers (nos. 10 and 11) by Mr. T. J. Westropp, the first on the Assembly Place of Ocnach Cairbre and Sid Asail at Monasteranenagh, county Limerick, and the second on Dun Crot and 'The Harps of Cliu', on the Galtees, county Limerick. Paper no. 12 is a description by the Earl of Kerry of the Lansdowne maps of the Down Survey.

Annual of the British School at Athens, no. 23. Half of the volume is occupied by a series of papers on Macedonia, M. Picard writing on the archaeological researches of the French army, Professor Gardner and Mr. Casson on antiquities found in the British zone, Mr. Pryce on a Corinthian pyxis, Mr. Welch on the prehistoric pottery, Messrs.

Cooksey and Woodward on mounds and other ancient sites in the region of Salonika, Mr. Welch on ancient sites in the Strymon valley, Mr. Tod on the inscriptions, and Mr. Woodward on the Byzantine Castle of Avret-Hissar. Other papers are by Messrs. Foat and Tod on Doris; by Mr. Casson on prehistoric mounds in the Caucasus and Turkestan; by Mr. Wace on St. Gerasimos and the English admiral, describing an alleged miracle performed by the saint on behalf of the island of Cephalonia; and by Mr. Welch on the folklore of a Turkish labour battalion. Mr. Wace also publishes some letters written by a British officer on active service in 1799. There are also articles by the late Mr. Hasluck on the rise of modern Smyrna; by Mr. Sealy on Lemnos; by Mr. Casson on Herodotus and the Caspian; by Mr. Tillyard on some Byzantine musical manuscripts at Cambridge; and by Mr. Tod on the Macedonian era.

Bulletin monumental, vol. 79, 1920. MM. Maitre and Douillard write on Langon and its temple of Venus, in which the theory that the chapel of St. Agatha is of pagan origin is discredited; M. Deshoulières contributes a paper on Romanesque corbel tables; M. Vallery-Radot describes the church of Notre-Dame at Longport, and M. Levé the chapter-house of Worcester cathedral. Other papers are by M. Stein on Jean Poncelet, architect of the Duke of Burgundy, and the new chapel at Souvigny; and by M. Lecacheux describing the recently discovered stone reredos at Saint-Ebremond-de-Bonfossé, with panels representing scenes from the Passion, the Resurrection, and the Descent into Hades.

Comptes rendus de l'Académie des Inscriptions et Belles-Lettres, March-May 1920, contains papers by M. Paul Monceaux on an invocation to 'Christus medicus' on a stone from Timgad; on the rock of Perescrita near Cenicientos, Madrid, by M. Pierre Paris; on Greek graffiti in the tombs of the kings at Thebes, by M. Jules Baillet; on the martyrs of Bourkika, by M. Monceaux; on the succession of the Mazdean princes, by M. J. de Morgan; on two inscriptions from Annobari, by M. L. Poinssot; and on intaglios with representations of geniuses of the Ophite sect, by M. A. Blanchet. There is also a plan of Carthage showing the position of the Punic tombs and of the principal buildings, with a full bibliography, by M. Merlin.

The June-August 1920 number of the same publication contains communications by M. Paul Monceaux on a bronze cross, inscribed *Antiqua-Postiqua*, found at Lambèse; by Père Delattre on the basilica of St. Monica at Carthage; by M. Charles Diehl on a Greek inscription from the basilica at Ererouk; by M. Edmond Pottier on an archaic colossal statue of Hermes Kriophoros discovered at Thasos; by M. H. Sottas on the unpublished Demotic papyrus no. 3 at Lille; by M. J. de Morgan on an unidentified sign on Sassanian coins; by M. A. Gabriel on the excavations at Fôstat; by Père Villecourt on the date and origin of the homilies attributed to Macarius; by Dr. Carton on the discovery of an antique fountain at Carthage; by M. F. Cumont on the underworld according to Axiochos; and by M. L. Poinssot on the 'Civitas Mizigitanorum' and the 'Pagus Assalitanus'.

Bulletin de la Société des Antiquaires de Normandie, vol. 33, contains

papers on the Hôtel le Valois d'Escoville at Caen, by M. G. Le Vard; on parsons, by l'abbé Masselin; and on the meaning of the canonical terms 'persona' and 'personatus' in Normandy from the twelfth to the fourteenth century, by M. Guillaume. M. Prentout writes on the origins of Caen, and on some charters of the dukes Richard II and Richard III; Dr. Gidon on the site of Caen at different epochs and especially in the tenth century; and M. Yvon on Francis Douce's views on Gothic art as shown in his correspondence with the Abbé de la Rue, and also, among the shorter papers in the volume, on Sir Walter Scott's relations with the same abbé.

The last volume, that for 1918, of the *Précis analytique des travaux de l'Académie des sciences, belles-lettres et arts de Rouen* contains among other papers articles by M. Valin on Walter of Coutances, archbishop of Rouen and Justiciar of England during the reign of Richard I; by Canon Davranches on the ancient obligation of praying standing; and by M. Delabarre on the Gaulish spirit at the time of the Roman occupation (an essay on the romanization of Gaul).

Mémoires de la Société royale des Antiquaires du Nord, 1918-19 (Copenhagen), pp. 241-370. Twenty years ago the discoveries of G. L. Sarauw at Mullerup (Maglemose, Zealand) put a new complexion on the Early Stone Age of Scandinavia, and any lingering doubts with regard to a Bone Age before the earliest Shell-mounds are now dispelled by K. F. Johansen's detailed report on a parallel find in the peat at Sverdborg, in the south of the same Danish island. The Copenhagen standard is a high one, and specialists have combined to make both the exploration and the report a model of procedure. The turbary in question is about 3 ft. above the sea and only passable in summer, having originally been an inland lake with a bottom of stony sand, successively covered by thin layers of brown and light grey mud; 7 in. of peat with roots and stems of sedges; 19 in. of a different peat with alder and reed; and a turfy layer of 6 in. at the top. The prehistoric level was towards the base of the lower peat, and occupied vertically no more than 6 in., the whole dating from a time when the pine and *Ancylus* shell were characteristic of the region, and the Baltic was a fresh-water lake.

In the 404 square metres excavated no less than 102,402 flints were found, a quantity that gives added significance to absences. Blades and end-scrapers on blades were included, but the round scraper was the commonest type, and the shell-mound axe and pick were poorly represented. Only one transverse arrow-head was found, the type being unknown at Mullerup and abundant in the shell-mounds. Of the pygmies most were of the long triangular form, and when laid on the flat face 700 were found to have the longer side on the right, 100 on the left. Leaf-shaped and segmental specimens were rare, and there were no rhomboidal or trapezoidal examples so common later. Bone and deer antler were used for adzes with oblique edges, and also for sockets to hold stone or boar's-tusk with the cutting edge set at right angles to the line of the haft. The axe was evidently a later invention, and points with one or more barbs on one side were earlier than the true harpoons of the Kunda culture of Esthonia. Bird-arrows with flint flakes set in the lateral grooves belong to this period, but survived

in the Danish shell-mounds and still later in Norway and Sweden. The fauna, too, including the aurochs and elk, preceded the shell-mounds, and there was both here and at Mullerup a total absence of pottery. The culture seems to have moved from south-east to north-west, but is still not the earliest in Denmark. A little later than Mas d'Azil, it seems to precede that of Tardenois; and the discovery may eventually throw light on the recent hypothesis that a long-headed population living on low islands in lakes of the interior were gradually displaced by short-headed invaders who preferred to settle on the sea-shore for the sake of the shell-fish (Lindqvist in *Rig*, 1918, p. 65). The illustrations are as usual unsurpassable, and provide a series of contemporary types that cannot fail to be of the greatest utility for comparison. There are large areas of peat also in the British Isles.

Fornvinnen: Meddelanden från K. Vitterhets Historie och Antiquitets Akademien (Stockholm), 1920, part 3. The number opens with an attempt by Hr. Lindqvist to account for the unequal distribution and general scarcity of pre-Roman Iron Age antiquities in Scandinavia. The Hallstatt culture of central Europe can be traced as far north as central Jutland; and La Tène is represented in the Isle of Gotland; but otherwise the Early Iron Age has left scarcely any traces in the north; and the author finds an explanation in Professor Sernander's contention, that the climate suddenly deteriorated after the Bronze Age and rendered the area in question barely habitable. Arguments for and against this view may be found in the remarkable report of the geological congress at Stockholm in 1910 (*Die Veränderungen des Klimas seit dem Maximum der letzten Eiszeit*). In 1916 Professor Montelius pointed out that some time before 500 B.C. the headquarters of the amber trade shifted from Jutland to the mouth of the Vistula, and gold and bronze no longer came to Scandinavia in exchange. Apart from the face-urns, West Prussia was, however, as poor as the north during the pre-Roman Iron Age; and the amber trade apparently declined or ceased altogether.

Whether this climatic change extended to central Europe or not, it is evident that Celtic culture was in a flourishing condition at the time on the Danube and Middle Rhine. The effect of the Hansa League on Gotland in the middle ages is called to witness, the suggestion being that the Celts of central Europe had a monopoly of trade that isolated and impoverished the north in pre-Roman times; and an east-and-west barrier across Europe lasted till the Teutonic tribes passed southwards as far as Switzerland in the last century B.C. In the reign of Nero Baltic amber was again being exported by the eastern European route, and the Celtic line was turned.

An article by Otto Rydbeck is a useful reminder that certain flint types belonged to more than one period, the shell-mound axe, the scraper, and transverse arrow-head, for instance, remaining in fashion down to the period of chambered barrows. This is clear, it is argued, from the discovery of these forms with polished celts or fragments, the imprint of grain on pottery, and the bones of domestic animals in the upper levels of the well-known Järvallen, a sand-bank parallel to the shore at Limhamn, near Malmö; the main deposit below being attributed to the shell-mound period. Several other cases are cited of

the association of early and late Stone Age specimens, but no attempt is made to upset the chronological system now generally accepted. The later Stone Age of Scandinavia begins with polished flint, but the leading types of the shell-mounds, far from going out of use, persisted almost throughout the megalithic period. Truly the way of the excavator is hard.

Mitteilungen der Antiquarischen Gesellschaft in Zürich, vol. 29, part 1, contains the first instalment of a paper by Herr Robert Hoppeler on the collegiate church of St. Peter in Embrach, with the text of the 1454 statutes printed in an appendix and two plates of the seals of the chapter and provosts, eighteen examples in all.

Oudheidkundige Mededeelingen uit 's Rijksmuseum van Oudheden te Leiden, 1920, part 2, contains articles on Saxon burghs in the Netherlands, by Dr. Holwerda; on Frankish funerary objects found in the church of St. Servais at Maestricht and on excavations at the monastery of Egmond by Dr. Holwerda.

Annales du Service des Antiquités de l'Égypte, vol. 19, contains the following papers: summary report on the excavations in Theban necropolises in 1917 and 1918, by M. H. Gauthier; selected Papyri from the archives of Zenon, by Mr. C. C. Edgar; Greco-Roman Egypt, by M. G. Lefebvre; a statue of Zedher the saviour, by M. G. Daressy; Nahroou and his martyrdom, by M. H. Munier; an obituary notice and bibliography of Georges Legrain, by M. P. Lacan; a fragmentary stela from Abousir, by M. G. Daressy; the obelisk of Qaha, by M. G. Daressy; the remains of a statue of Nectanebo II, by M. G. Daressy; mummy plaques, by M. G. Daressy; digging at Zawiet Abu Messallam, by M. Tewfik Doulos; funerary statuettes found at Zawiet Abu Mossallam, by M. G. Daressy; Abousird'Achmounein, by M. G. Daressy; notes on Luxor in the Roman and Coptic period, by M. G. Daressy; on the sign *Mes*, by M. G. Daressy; Theban statues of the goddess Sakhmet, by M. H. Gauthier; excavations in the necropolis of Saqqarah, by Mohammad Châban Effendi; tombstones from Tell el Yahoudieh, by Mr. C. C. Edgar; sundry Coptic texts, by M. H. Munier; and the camp at Thebes, by M. G. Daressy.

The American Journal of Archaeology, vol. 24, no. 4, contains articles by Mr. T. L. Shear on a marble head of Aphrodite from Rhodes; by Mr. L. B. Holland on Primitive Aegean roofs; by Mr. R. G. Mather on documents relating to the will of Luca di Simone della Robbia, and by Mr. S. B. Luce on Etruscan shell-antefixes in the University Museum, Philadelphia.

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Proceedings of the Society of Antiquaries

Thursday, 25th November 1920. Lt.-Col. Croft Lyons, Vice-President, in the Chair.

Mr. Ralph Griffin, F.S.A., read a paper on the heraldry in the Chichele porch at Canterbury Cathedral, which will be printed in *Archaeologia*.

Thursday, 2nd December 1920. Sir Hercules Read, President, in the Chair.

Mr. Reginald Smith, F.S.A., read a paper on Irish gold crescents, illustrated by examples exhibited by the Drapers Company and the Royal Institution of Cornwall (see p. 131).

Mr. L. H. Dudley Buxton, M.A., read a paper on the excavations at Frilford (see p. 87).

Thursday, 9th December 1920. Sir Hercules Read, President, in the Chair.

The meeting was made special to consider the draft of the proposed new statutes, which, after amendments, were carried unanimously.

Thursday, 16th December 1920. Sir Hercules Read, President, in the Chair.

Mrs. Eugénie Strong, LL.D., was admitted a Fellow.

Sir Lawrence Weaver, K.B.E., F.S.A., exhibited on behalf of the Ministry of Agriculture a stone axe discovered on the Ministry's farm settlement at Amesbury (see p. 125).

Mr. C. R. Peers, Secretary, and Mr. Reginald Smith, F.S.A., read a paper on excavations at Wayland's Smithy, Berks., which will be published in the *Antiquaries Journal*.

Thursday, 13th January 1921. Sir Hercules Read, President, in the Chair.

Dr. Ellis Howell Minns was admitted a Fellow.

Votes of thanks were passed to the editors of *The Athenaeum*, *Notes and Queries*, and *The Builder* for the gift of their publications during the past year.

The following were elected Fellows of the Society: Miss Gertrude Lowthian Bell, Mr. William Richard Lethaby, Mr. Edgar John Forsdyke, Dr. Eric Gardner, Mr. Bryan Thomas Harland, Mr. George Edward Kruger Gray, Rev. Edwin Oliver James, Mr. Frederick Tyrie Sidney Houghton, and Mr. Eric Robert Dalrymple MacLagan, C.B.E.

Thursday, 20th January 1921. Sir Hercules Read, President, in the Chair.

Mr. Eric MacLagan and Mr. George Kruger Gray were admitted Fellows.

On the nomination of the President, the following were appointed Auditors of the Society's accounts for the year 1920: Messrs. Francis William Pixley, Percival Davis Griffiths, Ralph Griffin, and William Longman.

Rev. H. F. Westlake, F.S.A., read a paper on the eastward and other additions to the greater English churches, compiled mainly from notes by the late Sir William St. John Hope, which will be printed in *Archaeologia*.

Thursday, 27th January 1921. Sir Hercules Read, President, in the Chair.

Rev. Edwin Oliver James and Mr. Robin George Collingwood were admitted Fellows.

Mr. A. Leslie Armstrong, F.S.A. (Scot.), exhibited a flint-crust engraving from Grime's Graves, Norfolk (see p. 81).

Mr. R. G. Collingwood, F.S.A., read a paper on the Tenth Iter, which will be printed in *Archaeologia*.

Thursday, 3rd February 1921. Sir Hercules Read, President, in the Chair.

The President referred to the sudden death on Wednesday, 2nd February, of Mr. George Clinch, the Society's clerk and librarian, and proposed that a letter of condolence be sent to the widow and family.

Dr. Philip Norman seconded the proposal, which was carried unanimously.

Mr. F. Lambert, F.S.A., read a paper on recent excavations in the City of London, to which Professor Keith, F.R.S., added a note on a Roman skull found in the City. The papers will be printed in *Archaeologia*.

Thursday, 10th February 1921. Lt.-Col. Croft Lyons, Vice-President, in the Chair.

Mr. Edgar John Forsdyke was admitted a Fellow.

Mr. E. Neil Baynes, F.S.A., exhibited a neolithic bowl and other objects found in the Thames, and Mr. O. G. S. Crawford exhibited

five hoards of the Bronze Age. Both papers will be published in the *Antiquaries Journal*.

Thursday, 17th February 1921. Sir Hercules Read, President, in the Chair.

Mr. W. Dalc, F.S.A., presented a report as Local Secretary for Hampshire, containing (a) an interim report on the excavations made by Mr. H. Sumner, F.S.A., on pottery sites in the New Forest, and (b) a note on a hoard of iron currency bars found at Worthy Down, Winchester, by Mr. R. W. Hoolley.

Mr. H. Clifford Smith, F.S.A., exhibited an English fifteenth-century painted panel.

Dr. W. W. Seton, F.S.A., read a paper on the Scottish regalia and Dunottar Castle.

Dr. W. L. Hildburgh, F.S.A., exhibited some alabaster tables, and Rev. W. G. Clark-Maxwell, F.S.A., exhibited an alabaster table of the Ascension.

The above papers will be published in the *Antiquaries Journal*.

Mr. J. S. O. Robertson Luxford exhibited a fifteenth-century wood-carving representing the Judgement of Solomon, and Mr. Aymer Vallance, F.S.A., exhibited a fifteenth-century chest with painted panels.

Thursday, 24th February 1921. Mr. C. L. Kingsford, Vice-President, in the Chair.

Lt.-Col. J. B. P. Karlake, F.S.A., read a paper on further observations on the polygon type of settlement in Britain, which will be published in the *Antiquaries Journal*.

Thursday, 3rd March 1921. Sir Hercules Read, President, in the Chair.

Brigadier-General Herbert Conyers Surtees, C.B., C.M.G., D.S.O., M.P., was admitted a Fellow.

The following were elected Fellows of the Society: Miss Nina Frances Layard, Very Rev. Albert Victor Baillie, Dean of Windsor, Rev. Francis Neville Davis, Sir Ivor Atkins, Mr. Saxton William Armstrong Noble, Mr. George Edwin Cruickshank, Lt.-Col. Oliver Henry North, D.S.O., Mr. Arthur Edwin Preston, Mr. Cyril Thomas Flower, Mr. Charles Igglesden, Mr. Pretor Whitty Chandler, Mr. Eric George Millar, and Capt. George Harry Higson.

Thursday, 10th March 1921. Sir Hercules Read, President, in the Chair.

Miss Nina Frances Layard, Mr. Cyril Thomas Flower, and Mr. George Edwin Cruickshank were admitted Fellows.

Professor J. L. Myres, M.A., F.S.A., communicated a paper by Mr. S. Casson, M.A., on the Dorian Invasion in the light of recent discoveries, which will be published in the *Antiquaries Journal*.

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Museums in the Present and Future

By SIR HERCULES READ, I.L.D., F.B.A., President

[Delivered at the Anniversary Meeting, 28th April 1921]

THE intelligent world has of late been passing through one of its cyclical phases. It would hardly be suspected that in these times the daily tale of news from home and abroad should be so wanting in human interest that it was necessary to seek for recondite subjects. Nevertheless astute editors or others on the staff of our daily newspapers have been constrained to discover that all is not well in our artistic atmosphere, and they call attention to the sad need of refinement in our surroundings, that our street architecture, though showing signs of grace, lacks coherence and taste, that our statues are deplorable, our public monuments wanting in dignity or design, and that, in fine, the necessity for organization and method is called for as much for our spiritual betterment as it is on the material side. A number of distinguished men, architects, painters, and critics of both, and of all else, have come forward, and their plans for a new and glorified earth have been placed before a grateful world.

I have no intention of following them through the involutions of argument and the condemnatory phrases brought to bear upon the conversion of the philistines. The handling of problems of art in these days leads the searcher through thorny paths, in which any but the thickest of skins may well be torn to shreds, and to handle them in the manner of the day demands apparently a phraseology all its own, really a special study in itself. The most competent and thoughtful student, therefore, might well hesitate before entering into a fray so confusing in its relations and

further befogged by the novelty and unintelligibility of the war-cries of the contending parties.

I am too timid to make any such attempt. But in common with others, doubtless, I have read the gospel of the various protagonists, and have found here and there morsels of good sense, and material for profitable reflection. Sir Aston Webb, in *The Times* of 22nd March last, agreed to a suggestion that the Royal Academy might call 'a meeting of representative men for the discussion of art in its direct relations to the public life'. Like many another suggestion couched in a well-arranged phrase, this has a heartening sound. But one cannot help wondering what exactly this scheme would mean when put into practice—who is to decide the question as to the men who are representative? And what, again, are they to represent? Is it the public eye and taste that they are to protect, or are they to be on the side of the artists, of any or all schools, and to dictate to the public what it ought to admire? We have long been familiar with the contention that artists alone are competent to judge of art; and that the productions of the old masters can only be safely entrusted to the care and judgement of new ones. The classic reply to this is not an unfair one—that your gourmet does not invite a cook to tell him whether the dinner is good, though he may reasonably ask him how it was produced. The atmosphere of our neighbours at the Royal Academy is not therefore necessarily the most bracing for the consideration of art in our everyday life. There is apt to be a suggestion of *parti pris*, and a narrowing of the very wide issues involved, which may reasonably include everything from the cut of our clothes to the design and situation of our cathedral churches.

The basic difficulty is, of course, that we come inevitably to the real question which will never be answered. What is good taste? That artists should be better equipped to answer it than another class is undoubted, inasmuch as they in their special fields have theoretically undergone a training in which questions of taste take no unimportant place. But, except in rare cases, the artist is more keenly interested and occupied with the technique of his profession and can spare but little time to arm himself at all points by the study of art as a whole. Even if he gives time to such studies it is by no means a certainty that he is, even then, possessed of good taste. However much individuals may disagree on particular cases, it is probable that it would be generally accepted that good taste may be in part innate, by inheritance or otherwise, in part it is the outcome of environment, and in a degree also it may be produced by direct training of the eye. In my judgement the effect of the first two would be likely to go deeper than the veneer

of exhortation. However that may be, if these premisses be approximately just, then there are no special reasons why an artist, such as a painter, should possess greater qualifications for the judgement of art in its direct relations to public life than are possessed by many a cultivated person with no power of graphic expression. There is the other side in this matter of taste. To produce, or to give a judgement upon, a work of art, any of the three processes set out above may be brought to bear, but certainly environment is a potent factor, and it is here where we as antiquaries may claim a voice. The term connotes of course a lengthened sojourn among, perhaps, people of good taste, but undoubtedly the involuntary refinement of the eye involves a surrounding of products of past times which by their passive qualities affect and enhance the intellectual standard of those living among them. This again is hardly open to question and leads to the conclusion that any one who is habitually confronted with the selected productions of the past may claim to possess an eye trained to distinguish good from bad with at least as much certainty as the painter, who deals probably with a much more limited field, and whose mind is inevitably occupied with technical points remote from questions of taste. For these reasons, among others, I claim that an antiquary experienced in discriminating minute differences of style in the productions of past times, has a right to call himself representative when questions of art in the everyday world are under discussion.

I have set down the position in general terms, but I am sure that my audience will readily apply my axioms to specific men of their acquaintance, some of them, it may be, in this room.

On one point sundry of our recent newspaper critics seemed to be agreed, in the verdict that there were to be no more museums. They fell into line here because the chief purpose of these institutions was to dissociate interesting objects from their natural and proper surroundings, rendering them dry, meaningless, and unprofitable, and the deduction seemed natural that museums were essentially a mistake. If this be the case, then it is clear that those already existing should be demolished. To stop their increase would be easy, but to destroy those in existence is a task presenting considerable difficulties and, in fact, I hardly suppose it will be attempted.

This rather drastic statement had the effect, however, of reviving in my mind the question that is no novelty to me, that is, how far museums did, in fact, justify their existence, and to what extent they repaid the nation for the vast annual outlay they entail. A complete answer to this question is not so easy as it

may seem. Our present conception of the utility and functions of a great museum is of recent growth. Even fifty years ago it was radically different, and it is not hard to see that in twenty years from now there will probably be an even greater change.

Museums in historically modern times owe their existence, first perhaps to the revival of interest in the arts of antiquity and the resulting birth of artistic methods, more or less imitative, based upon the classical style. Another side developed in the collection of rarities, natural and artificial, that formed the spoils of travellers or merchants to distant lands. From these two sources came into being all the little princely collections to be found in every great city of Europe. In very few cases, however, did any of these museums fulfil, or even aim at fulfilling, the purposes of a museum as we understand them to-day. They were rather in the main brought together to excite astonishment, like monstrosities at a fair, than as handmaidens to history or knowledge of the past, and were only occasionally used as incitements to the artists or craftsmen of the day.

Such a collection was that of Sir Hans Sloane, which, with those of the Harleys and Cottons, were the nucleus of the British Museum. Its history from its origin in 1753 is well known, and readily found. But in the beginning it could not make any higher claim than any of the princely museums of the Continent. It was in the main nothing but a collection of 'rarities'. Its emergence from that passive state was naturally a matter of time, and it is also rather a delicate question how far the change from a passive to an active condition was due to outside demands or to internal energy and far-sighted intelligence. But the transformation was not effected until well into the last century, and just about seventy years ago some departure was made from the old academic conditions that had hitherto governed the administration. It seems likely, on reviewing other events of this period, that this change was not an isolated incident, but was rather a result of a cultural wave that passed over the western world at this time. In 1851 came the Great Exhibition, and with it an all-pervading ferment in the art world. As on many occasions since, and no doubt many before, we were found to be a nation entirely deficient in taste and decadent in matters of art, with everything to learn. The wonders of art craftsmanship sent over by our continental neighbours were held up to our admiration, we were told to note their beauties and to use them for inspiration, and it was decided that never again was the English artist and craftsman to be in any respect second to those of any foreign competitors. England was safe. Not only was it to

contain examples of the best craftsmanship of the day, but also specimens of the worst, in order that the British workman might see not only what was to be applauded, but equally what was condemned, and the latter were shown apart in what was known as 'The Chamber of Horrors'. Something definite and concrete resulted. The Museum of Ornamental Art was installed at Marlborough House, and it was decided, in effect, that the millennium of art had arrived and that England was saved. Thus started the great museum of 'applied art' at South Kensington, now known as the Victoria and Albert Museum. Its specific function was to create a beneficial revolution in the craftsmanship of England, and to this end these masterpieces of modern work were acquired on generous lines from the great international exhibitions that followed the first at intervals of a decade or more. In addition to products of our own time, a large and important collection was made of works of art of the Renaissance and later periods. How far this expenditure of talent and energy went towards creating a new school of industrial art in this country, it is hard to say, and at any rate opinions differ widely; but, fascinating as the subject is, I hardly think this is the place to pursue it. What at any rate was assumed, and I fear on very insufficient grounds, was that as soon as examples of really good styles were generously provided and placed before the British manufacturer and artisan, nothing more would be seen of badly-designed and ill-conceived articles of daily use. From that day onward he would eschew evil and do only good. Nothing of the kind took place, and it was reluctantly admitted that a great deal more was needed than merely to fill galleries with fine chairs, tables, or candlesticks before the conservative Briton would mend his ways. Trade patterns and moulds that had served the British citizen for a generation or more held their own against the 'new art' of that day. The public was probably entirely satisfied, and the manufacturer very naturally hesitated before scrapping all his old models in deference to what he doubtless believed to be a passing whimsey of a limited class. What the buyer demanded the manufacturer provided, and each was content. Thus the first organized attempt in this country to bring art into the home was proved a failure. This failure, as represented by its final result, the present Victoria and Albert Museum, was in other ways a gigantic success, inasmuch as the contents of the Museum, though rejected by the craftsman, have become in course of time the most wonderful gathering of the art of recent centuries that has been systematically made in any country.

During these sixty years or more the British Museum pursued the even tenor of its natural development, meeting as far as possible the public demand for adequate representation of the many novel branches of science that sprang up during the last half of the century. Geology gradually merged into prehistoric archaeology, and collections from the French caves and the gravels of Abbeville were added. The study of prehistoric man naturally led to that of the stone-using races still existing, and ethnography became a study and a definite branch of science, and, except to those with minds stagnating in intellectual backwaters, was no longer regarded as something comic. India, her arts, religions, and antiquities, all of them surely deserving of substantive study, have always been treated as an Ishmael in our museums, though no doubt her religions have met with more serious treatment from the theological side. All these new and by no means simple lines of research were added one by one to the more ancient and academic list that was characteristic of the British Museum in its early days. It was not, however, a propagandist institution. It seemed ready to believe that salvation could equally be attained by other roads than those that led through its galleries. The aim would seem to be formulated in the statement, 'Here we have provided for the instruction of the public a conspectus, as complete as we can make it, of man's progress in the arts of life and in culture, from his first appearance on this earth up to your own times. Many of his productions have no claims to beauty, but every variety is needed to show how man progressed or retrogressed, during the ages he has lived on this earth.' This being said or done, the doors were kept open for such as cared to enter, and it must be said that much good resulted. But nothing in the nature of advertisement was attempted, and, of the two, the press was kept rather at a distance than welcomed.

There are other museums in London, but I have preferred to take these two as symbols, rather than to confuse the issue over a wider field. The one established and constituted for the unique purpose of collecting and fostering art and its products, and disregarding entirely historical association or mere antiquity; the other, at Bloomsbury, engaged in dealing with all man's productions, artistic or inartistic, but trying to illustrate his ascent from the earliest times to the present, by setting out in orderly array, all that research could furnish to bear upon so complex a subject. How far these two treasure-houses of art and history have served to obfuscate the public mind by collecting hundreds of objects and showing them in serried ranks away

from their natural surroundings, is not a question that I, of all people, can be expected to answer without bias. The natural habitat of a watch is, I presume, in the pocket of its owner, but if the watch in question no longer serves its purpose of indicating the hour owing to a long life of three hundred years, it would seem to me not a crime, but the reverse, to place the instrument where its artistic and technical qualities can be appreciated. To take a much more debated instance. The frieze of the Parthenon now lines the walls of the Elgin Room at the British Museum, at about the height of the spectator. In the temple itself it was some sixty feet above the head of the visitor, and, as I know by experience, it was quite out of the question to obtain any clear view of it without mounting to its level. The barbarity of its removal has therefore brought some compensation, and though, in the opinion of those who aspire to lead the artistic opinion of the newer school, it belongs to a negligible period of art, yet I fancy it will continue to please the senses of a large number of persons who are content to be labelled as old-fashioned.

As I reminded you, the British Museum was founded in 1753, while the Victoria and Albert Museum was the child of the exhibition of 1851, as indeed can still be seen in the spacious 'courts' with slender iron supports and galleries that inevitably suggest a palm-house. During the life of the Victoria and Albert Museum more museums have been built over the whole world, in Europe and North and South America especially, than were built during the whole history of the world up to that time. Some few of these (and here I would confine myself to the nineteenth century) have been built on plans well and carefully thought out, and by men having in view the specific purpose to which the building is to be applied. In the case of the museum at Boston, Massachusetts, a commission, consisting of members of the Committee and an architect, spent months in Europe to examine the existing museums and to discover, from the defects and advantages of each, what conditions would best suit the site at Boston. They went even further, and erected a temporary building on the proposed site and studied the effect of various methods of lighting over the course of a year. This is now a good many years ago, and, as I have stated it, such preliminary investigations might seem prompted by the most ordinary common sense. At that time no museum building had been recently erected, and even if there had been one in existence, the conditions of light and climate might not have been the same as those prevailing in New England. But, however that may be, the Boston Museum was no haphazard affair. It was built from

designs conceived and thought out by men of practical knowledge of what they wanted. In my judgement the result is excellent in the main, though I believe that this opinion is not universally held. The point on which I wish to lay emphasis, however, is not whether these elaborate precautions were successful, but that so much preliminary thought was given to the matter, and by practical business men who gave their minds to museum planning and arrangement in conjunction with an architect who could supply the technical knowledge. It may seem odd to insist so strongly upon what may seem to be so commonplace. For do we not know that if a hospital or laboratory—or even a warehouse—is to be erected in this country or elsewhere, the plans are necessarily submitted in the first case to the medical staff, in the second to the chemist, or thirdly to the merchant, and that they and the architect together decide on what shall be erected? Surely as much, and even more, is demanded for a museum. But in this case nothing of the kind happens. I know of no instance in the last century where anything like deliberate consultation has taken place between the architect charged with the construction of the building and the officers of the museum whose business it is to utilize it. It is not easy to discover the reason for ignoring so obvious a collaboration, and in fact, there is probably no reason but the negative one that a museum is not with us regarded officially as a scientific undertaking, where the means should be made to subserve the end. It would seem that the only factor taken into consideration is conceivably the cubic capacity of the building in relation to the mass of the collections to be exhibited. No thought would appear to be given to the collections as a direct means of education, or care taken that the planning of the galleries, and the resulting arrangement of the contents, have an obvious bearing on the functions of the institution.

The national museum of Wales, still in process of construction, is a notable exception to the practice of the preceding century, and I take pleasure in recording that here perhaps is found a promise of better things in the future.

My strictures on the museums of the nineteenth century would seem to be a criticism of the architects, but indeed that is not the case, except to a very limited extent. The architect is given a site and is told, in effect, that a museum is wanted on that spot, and he proceeds to design one. He cannot know enough without elaborate detailed information from those who are going to fill the building with works of art, to make his plans accord with the contents and their arrangement, and no museum exists in this country that can help him with ideal conditions. The result in

every case must necessarily be an experiment, based upon lamentably inadequate data. We have two buildings in London which are all too complete as illustrations of this statement, the Victoria and Albert Museum at South Kensington and the northern annex of the British Museum. The architects are both friends of my own, and I know, in the one case, that the architect is guiltless in the respect I am emphasizing, and I feel certain, though I cannot say that I know, that the other is equally innocent. It is the system that is wrong, and until the principle is admitted that the contents of a museum take precedence of the building that contains them, no advance is possible in museum planning. I do not propose on this occasion to go into the details that have led me to this conclusion with regard to these two important public buildings. The list would be too long; my present desire is to call attention to what has happened in the immediate past in order to avoid such deplorable and costly mistakes in the future. And, finally, to state with all the emphasis that I possess that success will never be achieved until the architect works in the most intimate understanding with those who have to use the building when he has finished it. No building, however beautiful it may seem to the passer-by, can be held to be anything but a failure unless it serves the purpose for which it was built.

Whether it be the case that we have too many museums or the contrary, there is one aspect of the greater ones that will become a matter for urgent consideration before long. It may also concern some of the smaller, and indeed may be causing anxious thought among them. I have in mind the fact that all London museums are by their situation and surroundings restricted in the possibility of expansion. The British Museum is a square block in the very centre of the town, possessing space for new galleries of some size on the eastern and western sides, but no more. The Victoria and Albert Museum also fills the site on which it stands. Of the smaller institutions, the Guildhall Museum, always crying for more space, would seem to have already reached its extreme limits. Experience shows clearly that if a museum is to remain alive, it must inevitably increase the number of its contents, and a time comes when the groaning walls cry out that they can hold no more. Here, then, we have a problem that is by no means so remote as might be thought. In the not distant past the trustees of the British Museum solved the problem of space at Bloomsbury by transferring all the natural history collections to a new building three miles away. There, however, they had a clear-cut and logical division—separating the works of man from those of nature. In the matter of the depository for newspapers at Hendon, sheer

necessity rather than logic dictated the measure. But further partition must inevitably come, and it seems to me clear that the library is the next section to fall away from the parent. Here, as with the natural history, the division would be both logical and practical. All the other departments of the museum are so intimately connected that they could not be separated without seriously damaging both those taken and those left. As I said before, they form a complete picture of man's culture from the beginning of time. Books are of course included also, but a public library is in its essence a very different thing from a great museum, and in every country but England receives different treatment. Here we have, *eo nomine*, no national library—the term 'British Museum' effectually masks it, and no hint is given to the casual stranger looking at the building or reading its notices, that it is the shrine of the national library. An innocent inquirer receiving an official notification from its administration might reasonably wonder why its governing officer should be entitled 'Principal Librarian', even if he were aware that one of its sections bore the title of 'Printed Books'.

We in London, and in England generally, are so accustomed to the present scheme, and the Reading Room is so familiar a feature of the museum, that it never occurs to us that we are living under unusual and archaic conditions when we bury our national library in our national museum and never mention it by name, or include it in a directory.

In this particular respect France is more logical, and with great advantage. At the same time the palace of the Louvre, considered as a museum, obviously leaves much to desire, in spite of, and partly because of, its occasional magnificence. The halls and galleries of a museum should please by their proportions, in other words, by their appropriateness, not by the gorgeous character of their decoration.

I hardly suppose that any one will question the propriety or the practical utility of this country possessing a national library; but it is only the few who realize that the working of the Copyright Act alone will in time turn what may now be an ideal into a necessity. The library, like every other section of the museum, is straining at its bonds, and must within a small number of decades, burst them to attain freedom and live its life usefully. For this reason alone, and there are others, it appeared to me that it would have been prudent to take steps to secure the still vacant land on the north of the present building as the site of the national library. The advantages need not be pointed out, and I see no insuperable difficulties in adapting the land to the purpose.

A public library can be as well ten stories high as five, and in this it differs essentially from a museum, all parts of which should be accessible to the public. However suitable this site would be for London University, it would without question be better fitted for the national library. I can see now the completed building as I imagine it. Facing the northern façade of the museum would be a building somewhat less in height, with a tower of any reasonable height at either end ; each block would have a courtyard in the middle, and a similar tower at each corner, while the four blocks would be connected over the smaller streets by arched bridges. The existing traffic need not be in any way diminished, for a triple arch might be made the principal feature in the southern front which would cross Museum Avenue and face the present museum building.

The probability of this scheme being even considered is not, however, great, and the present congestion of all parts of the existing museum will be forced to find relief in some other direction. Many years ago I discussed this question, at that time a remote one, with Mr. Spring Rice of the Treasury, and the suggestion I then made is still worth consideration. It had its origin in the double purpose served by a great public museum. First, the obvious one that the contents are methodically set out in an attractive manner in order that the ordinary taxpayer may see his possessions and derive edification and amusement from them ; and the second and really important purpose of the collections, that they should be of use to scientific and historical scholars in their studies. Both of these must be kept constantly in mind by the persons in charge. My idea was to diminish greatly the exhibited portions, withdrawing numbers of objects now shown, without any real loss to the ordinary visitor, but to the great gain of the serious student. The objects thus withdrawn would be kept as a reserve series in workrooms where they would be available to the student in exactly the same way as books are now given out to him in a library. One beneficial result would be that increases in the collections would be accommodated at infinitely less cost than is now possible, where each year demands additional exhibition cases, now more than ever a costly affair.

To put such a scheme into practice would not, however, be so simple as it seems, if the scene of the experiment were to be one of our great museums. In the first place none of the buildings has either adequate storerooms of the necessary type, nor has any one the equally essential students' rooms. For a necessary condition of the scheme is that the exhibited and the reserve collections should be in close proximity to each other, in order that the two can be

treated as a unit, as of course they are in reality and in actual working. This plan is in actual operation in Boston, where, if I remember rightly, the reserve collections and students' rooms are immediately beneath the corresponding exhibition galleries.

The reserve collections would of necessity be systematically arranged, in much the same way as the books in a library, and available for the inquirer on demand, and he would require comfortable and well-lighted quarters in which to study the articles so handed to him. These provisions do not exist anywhere in our greater museums, and certainly could not be made in all of them. A further change, though not in itself presenting any special difficulties, must not be overlooked. At present the student, as well as the casual visitor, can see for himself the extent of a particular series, when the whole is shown. If a large part be withdrawn from the public galleries, he will demand that catalogues should be printed more generously than at present, in order that he may know what hidden material is at his command. This will give additional occupation to the higher staff, who, on the other hand, will enjoy greater freedom from the greater simplicity of dealing with accessions. The duties of other branches of the staff will also change, and the method of placing the bulk of the collections before the student public will again more nearly resemble that to be found in a library. Each specimen will be press-marked, in the same way as a book, and the student will formulate his demand for it in a similar manner.

If some such scheme as that here outlined can be adopted at the British Museum, then, with the additional space in reserve that is now represented by the private houses east and west of the museum rectangle, the building will be able to hold its contents for some time yet. But in course of years the inevitable moment will come when the library must go, and the difficult question of its site will then be a problem not easy of solution. But it will not be our problem.

On the other hand influences are at work which will in the future tend to diminish the flow of treasures into our great museums. Some of these influences I hold to be sinister, inasmuch as if they are allowed full play, they will retard the progress of knowledge in a pernicious way and to a degree unknown. In my Address to this Society last year I alluded to the regulations that threatened to crystallize in India, under which it is, or would be, illegal to export from India any ancient remains for the enrichment of other countries or museums, even the British Museum. I am fairly sure that this idea did not originate with any native of

that country, who was probably ignorant or careless of any such grievance until it was pointed out by some ingenious official. People of all nationalities are usually well aware of the value of a grievance, for once in the possession of a good sound one they are in a position to exchange it for something of far greater value for which they really have a desire.

India does not by any means stand alone in this respect, nor is it the only part of the world that places an embargo on the export of its antiquities or makes regulations which have the same effect. To go no further than this city of London, we have here no less than three special museums devoted to the preservation of all concerned with her past: first, the London Museum; second, the Guildhall Museum, specially for the City, no doubt; and thirdly, the County Council Museum, which is destined to embrace what is called Greater London. In a sale by auction where relics from London are included, it is a common thing for me to be requested to stand aside in favour of one or another of these museums. This sometimes results in some objects being lost both to the London museums and the British Museum. To go further afield, the same principle is applied right and left; all great cities, and some of the lesser ones, are apt to demand similar concessions, especially where the museums have energetic curators.

A continental archaeologist coming to our islands to study their antiquities, would almost certainly proceed first to the British Museum, and would expect with the same certainty to find within it a complete representation of the archaeology of the British islands. What he finds in reality is something very different. He discovers that the British Museum is debarred from acquiring, apparently either by purchase or gift, a single object of antiquity from any part of the islands except England itself, and the latter only by the grace of some indulgent local museum. When, in view of this very odd situation, one glances at the countries that have possessed an ancient civilization in either hemisphere, the condition of the unfortunate student in the future is really very sad. Greece and Italy, and other countries in Europe, specifically ban the export of antiquities. The same may be said of a number of the states in South America, and in Mexico I believe the ban exists, though perhaps somewhat neglected at present. Thus from none of these countries can a general museum of archaeology expect to obtain relics of their past history, and the functions of such an institution will diminish in extent and utility year by year until they ultimately cease to act. The unlucky student of ancient art will be forced to travel from Athens to Rome, to Crete, Copenhagen, Stockholm, Pekin, to Japan, Guatemala, Mexico, and the ends of

the earth before he can obtain a general view such as in a central museum would involve a journey perhaps of a couple of miles.

This is probably extreme as a statement of what will actually occur in the near future, for in matters of this kind human nature largely enters. And no experience is more common than to find that human nature is impatient and scornful of laws which are repugnant to common sense. The laws will be evaded, smuggling will increase, the morals of the merchants will be correspondingly lowered, and 'prohibition' in works of art will be a mark for the scoffer, as it is now in other directions.

The demand for knowledge and for intellectual possessions, whether they be owned by persons or by corporations, will never subject itself to myopic parochial laws. It is only in countries like our own where such curtailment of personal liberty can ever flourish. It is hard to conceive of a state of things more contrary to every principle of equity than that which prevails between the museums of England and Scotland, and for that matter Ireland too. The claim made for the national Scottish museum is that it has a vested right to everything Scottish, and in addition may secure anything else that it can get. That was the principle laid down by its late director, Dr. Joseph Anderson, a distinguished antiquary, and probably a man of wide views on other subjects. Yet he seriously maintained that nothing that could claim a Scottish origin should ever leave the country. At the same time he admitted that the finest stone hammer ever found in Wales formed part of the Edinburgh collection, as an 'illustration', though he confessed that no Scottish implement had ever been found that at all resembled it. It is hard to believe that any one who had given serious attention to the intricate problems of the history of culture should take up a position so one-sided and so childish. The English are called insular, but it is seldom that they carry insularity to such lengths as this. Nor is it even a question of relics of any rarity. In one case that I have in mind ancient remains by thousands are piled in drawers, and studied practically by nobody, and yet not a single specimen can be spared for comparison with the many similar remains in other museums and from other countries. The situation can only be paralleled by comparing it with the views of the wildest of Zionists. They appear to claim that they are to be entitled to preserve every privilege that belongs to their race or religion, such privilege being safeguarded at every turn by the power and wealth of the British people, who on their side are to gain no advantage whatever. But as soon as something is demanded of the Zionist of this type he pleads poverty or incapacity, and gives nothing. 'Not only is

humanity outraged by so unjust a system, but the increase of knowledge is stopped. The comparative method is the very essence of archaeology and this childish parochialism strikes at its very roots. Unfortunately museum interests count for nothing as soon as politics are brought to bear, and there can be no question that even in matters intimately concerning the welfare and custody of our national antiquities, politics and political considerations take a prominent place. Governments, of course, have neither soul nor conscience on any such question, and where, as commonly happens, there is but little real public opinion, a single noisy member of Parliament, by threats, may readily turn a ministry in any direction that pleases him. For it need hardly be pointed out, museums in general have no effective advocate in Parliament.

There is no insuperable difficulty in reconciling the claims of a great central institution as against those of smaller ones. A full and complete representation of the local history and of the flora and fauna of the district or county is, of course, a first duty for a county museum. But there are limits, even here, and to amass objects by thousands whether it be birds' eggs or flint arrow-heads, when a few score or a few hundreds would amply serve the purpose of the student, is to misuse the space at command, and to confuse rather than to instruct. It betokens the type of mind of the maniac coin-collector, who having a coin hitherto unique, carefully destroys the second example that comes into his hands. The purpose of each is not to use what he collects, but to prevent any other person possessing it. Here again human nature enters, but not of the kind that helps to foster knowledge, or with a tendency to large views. The central museum wants only a very small proportion of the specimens from any given district, its purpose being, not to illustrate the peculiarities of any given spot, but rather to use the objects in a comparative or evolutionary series, and thus to demonstrate the existence of trade-routes or cultural connexion on the one side, or on the other the growth of specific types of objects, and by these means to settle their chronological sequence. It is hardly necessary to elaborate these points here. They are, in fact, commonplaces. But commonplaces, like common sense, are not always recognized, and my present point is that self-evident facts, while gaining acceptance as general statements, are treated in a very different manner when they become specific instances.

One can only hope that with the spread of knowledge and the increase of general intelligence, it will be found that it is, if not more blessed, at least as blessed to give as to receive, and

that not only the progress of science, but the harmony and charm of life, are increased thereby.

Much of the foregoing may seem a mere futile cry in the wilderness, and some may demand that he who complains should point out a remedy. To the first I would reply that men before now have gained merit by being apostles of the obvious, and that good may be done by a bare statement of self-evident facts. So that what I have set down here may by chance not altogether miss its mark.

As to the second, I confess frankly that a simple and direct remedy is hard to find. It may in some quarters be thought that if we set up in this country a Ministry of Fine Arts, as in France, we should at once put an end to any overlapping or possible disagreements in all our artistic and similar institutions. From my experience of the working of the French system, I do not think that such a result would by any means follow. I have, moreover, a strong suspicion that after a few years of the rule of such a ministry here, those chiefly concerned would find that they had exchanged the control of King Log for that of King Stork, in the manner of Aesop's frogs. In fact, I do not believe that there is any royal road or government road by which the desired goal can be reached.

Until the heart and the intelligence of the people at large can be touched in such matters, until they attain to the stage of realizing the great material advantage to them and their children of an understanding of the value of art in daily life, there is but little hope of any general progress in refinement.

The omens are assuredly not in our favour at this moment, but I am confident that this phase will pass, and with a world at rest the minds of men will turn with a sense of relief to the forgotten or unknown pleasures to be found in the glory of a beautiful universe, and will crown it with still greater beauty.

Wayland's Smithy, Berkshire

By C. R. PEERS, Secretary, and REGINALD A. SMITH, F.S.A.

[Read 16th December 1920]

I. THE HISTORY OF THE MONUMENT

IN Northern mythology Wayland the Smith corresponds to the Roman Vulcan or the Greek Hephaestus; and his name cannot have been attached to the well-known group of sarsen slabs in Berkshire till the Teutonic invaders reached the upper Thames in the fifth century. This cunning worker in metals appears on the Franks casket in the British Museum, dating from soon after 700; and the monument is mentioned under the name of Wayland's Smithy in a charter of King Eadred to Aelfheh dated 955.

The site is two miles from the western boundary of the county, one mile east of the village of Ashbury, and the same distance south-west of the White Horse near Uffington. It is now encircled by beech-trees near the brink of the downs, about 700 ft. above the sea; and 220 ft. to the south runs the prehistoric track known as the Ridgeway. The legend connected with the stones is well known and has been discussed by Thomas Wright in *Archaeologia*, xxxii (1847), 315, and *Journ. Brit. Arch. Assoc.*, xvi, 50; also by Dr. Thurnam in *Wilts. Arch. Mag.*, vii, 321.

Mention may also be made of Oehlenschläger's treatment in *Wayland Smith*, from the French of G. B. Depping and F. Michel, with additions by S. W. Singer, published in 1847; but the tradition has been kept alive above all by Sir Walter Scott, who gave a garbled version of it in *Kenilworth*. That the novelist never visited the monument but derived his information in London from Madam Hughes, the wife of the Uffington vicar (who was also canon of St. Paul's) and grandmother of Tom Hughes (the author of *Tom Brown's Schooldays*), has been established by the researches of Mr. H. G. W. d'Almaine, town clerk of Abingdon, to whose zeal and pertinacity the recent exploration of the site was chiefly due. The Smithy has for years been scheduled as an ancient monument, and the Earl of Craven, as owner, not only

readily gave permission but generously provided the labour for the excavations, which were carried out under our own supervision in July 1919 and June 1920. Subscriptions towards incidental expenses were thankfully received from the Berkshire Archaeological Society and its honorary secretary, Rev. P. H. Ditchfield, F.S.A.; also from Rev. E. H. Goddard, honorary secretary of the Wiltshire Archaeological Society, and from our own Society. Mr. d'Almaine not only took an active part in the arrangements, but made two models; and Rev. Charles Overy of Radley College burdened himself with apparatus, and undertook with success most of the measuring and photography. Subsequently, the human bones discovered were skilfully repaired and fully described by Mr. Dudley Buxton, of the Oxford Anatomical Museum. Lord Craven's agent, Mr. Beresford Heaton, did us great service, and his local representative, Mr. McIver, loyally carried out his instructions to the advantage of the party and the venerable site itself. To all these gentlemen we hasten to convey our thanks, and regret that three beech trees within the enclosure had to be felled, as their roots were interfering with the stones of the chamber.

The earliest illustration known or likely to be found is a rough sketch by John Aubrey about 1670 (fig. 1), reproduced in *Wills. Arch. Mag.*, vii (1862), 323 from his *Monumenta Britannica* in the Bodleian library. The chamber and surrounding stones are evidently not on the same scale, but the outline and measurements of the barrow (about 203 ft. by 66 ft.) are approximately correct. The standing stones on the south-east border of the mound are still in position, but most of the others shown as above ground have disappeared; and our excavations have brought to light several that had fallen and been covered up before his time. It may be possible eventually to disclose the stones now lying concealed in his gaps. The chamber is very summarily drawn, Aubrey perhaps starting the notion that the eastern transept was a cave; and it is curious that most of the illustrations and accounts of the monument published since his time have perpetuated the error, as for instance Chambers's *Book of Days*, July 18, vol. ii, 83 (published in 1888).

The next publication is dated 1738, and took the form of a letter to Dr. Mead concerning some antiquities in Berkshire, by Francis Wise. His plate opposite p. 20 shows the entire barrow with rather angular outline, highest at the south end and irregularly covered with stones, among which the chamber can be barely identified. There is also a nearer view, taken from the west, and showing the earlier approach from that side, whereas the path from the Ridgeway now leads to the *south* end of the monument.

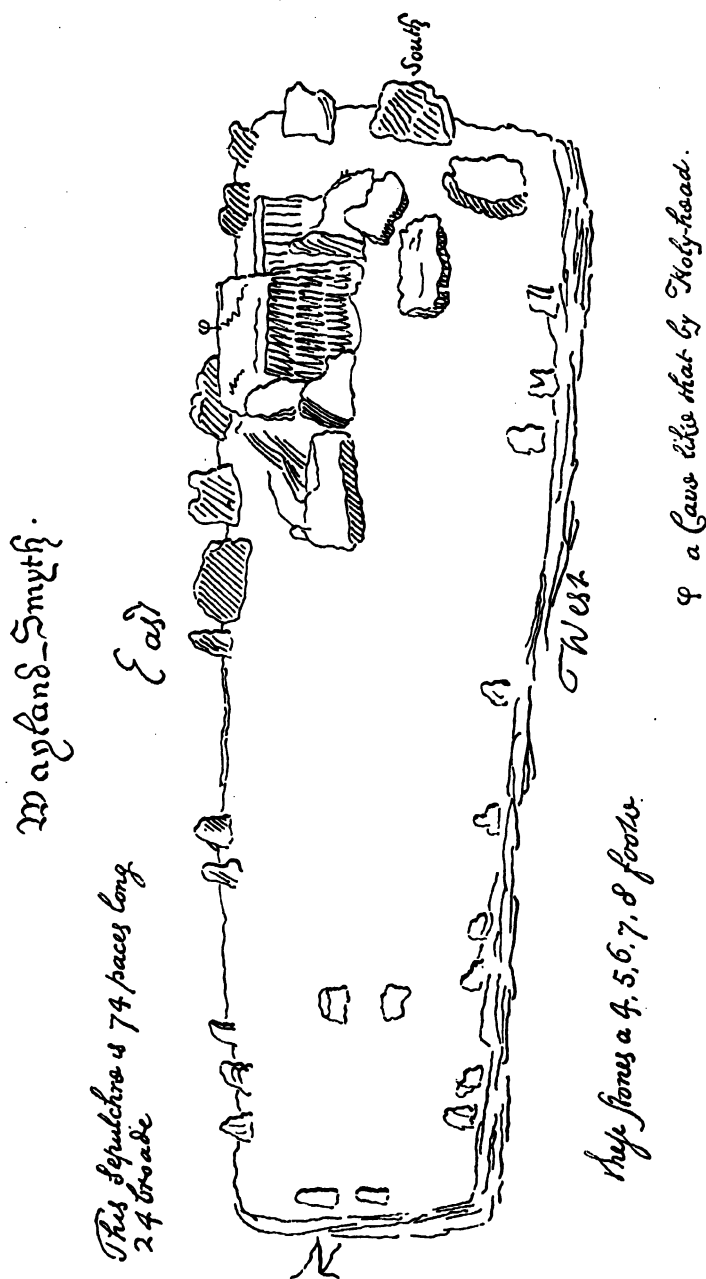


FIG. 1. Aubrey's Sketch of Wayland's Smithy, about 1670.

The stones are woefully out of drawing, but roughly represent the present arrangement at the southern end of the barrow.

His distant view is reproduced in *The Mirror of Literature, Amusement, and Instruction*, vol. xxi (1833), p. 88, this and another reference to vol. viii (1826), p. 33 having been furnished by Dr. Eric Gardner, F.S.A. The later view represents the 'Cave' surrounded by fir-trees, with water in the foreground (perhaps in the fosse), and a separate stone on either hand (on the west of the chamber). In the interval of nearly ninety years a belt of fir-trees had grown up round the barrow; and Thurnam states that firs and beeches were planted about 1810, the former being dead in 1860. No trees are included in Lysons's plate published in 1806 (description in *Magna Briannia*, i, 215 of the 1813 edition).

Sir Richard Colt Hoare wrote of the monument in 1821 (*Ancient Wills.*, ii, 47):—'It was one of those long barrows, which we meet with occasionally, having a kistvaen of stones within it, to protect the place of interment. Four large stones of a superior size and height to the rest, were placed before the entrance to the adit, two on each side; these now lie prostrate on the ground: one of these measures ten and another eleven feet in height; they are rude and unhewn, like those at Abury. A line of stones, though of much smaller proportions, encircled the head of the barrow, of which I noticed four standing in their original position; the corresponding four on the opposite side have been displaced. The stones which formed the adit or avenue still remain, as well as the large incumbent stone which covered the kistvaen, and which measures ten feet by nine.' He notices the north and south axis of the barrow as exceptional, but somewhat perversely states that 'the kistvaen is placed towards the east', not realizing that the whole of the chamber was originally roofed with capstones like that of the eastern transept. It was, however, recognized a hundred years ago that the sarsens once formed the chamber of a long barrow and that the entrance was flanked by two pairs of enormous stones now fallen.

The first careful drawings of the Smithy were published in *Archaeologia*, xxxii (1847), 312, pl. xvii. They were the work of C. W. Edmonds and illustrated a paper on the monument by a former secretary of the Society, John Yonge Akerman. The chief merit of this paper is its recognition of the cruciform plan, but in this he was anticipated by Stukeley who died in 1765 (*Surtees Society's* vol. lxxvi, 8).

A pointed contrast in method may be seen in *Wilt., Arch. Mag.*, vii (1862), which contains an account and drawing of the monu-

ment, both bristling with inaccuracies (p. 315), followed by a sober account from the pen of Dr. Thurnam (p. 321). The latter gives as much information as was possible without systematic excavation, and is fully worthy of one of the greatest names in British archaeology. References to the literature of the subject are given in his note on p. 330.

At the International Congress of Prehistoric Archaeology at Norwich and London in 1868, the late Mr. A. L. Lewis read a paper 'on certain Druidic monuments in Berkshire' (*Report*, pp. 38, 44). He accepted the cruciform plan of the Smithy and thought the gallery had been cut into two chambers by two of the wall stones being set crosswise. In his opinion the monument was intended for use as a tomb, not as an altar, and the mound that probably covered the supporting stones (leaving the capstones exposed) would not have contained much material. His plate gives a plan of the stones surrounded by trees, and he refers to the abundance of sarsen stones at Ashdown, two miles to the south, which are said to have been still more numerous before the house was built (Ashmole, *Antiquities of Berks.*, ii, 198).

The chambered long barrows of England may be said to agree in type, but each has its peculiarities, and Wayland's Smithy has more than usual. Thurnam states in his paper on Long Barrows (*Archaeologia*, xlii, 205) that two out of three, perhaps four out of five, have their long axes approximately east and west: the rest are about north and south, and both Nympsfield near Dursley, Gloucestershire and Nempnet in Somerset, nine miles SSW. of Bristol, like Wayland, have their chamber at the south end. His plate xiv is useful as showing side by side the plans of several such chambers, but no true parallel for the simple cruciform arrangement of the stones is there given. Borlase (*Dolmens of Ireland*, ii, 457-8) saw a resemblance to the long barrow at West Kennet, Wilts., which had squarish ends (*Archaeologia*, xxxviii, 409) and a stone enclosure, according to Aubrey's drawing of 1665. The dimensions in this case were 336 ft. by 75 ft., the narrow end being 40 ft. across.

In the *Archaeological Review*, ii (1889), 314, Sir Arthur Evans compared Wayland's Smithy with one of the monuments at Moytura, co. Sligo, of which a view and plan are given in Fergusson's *Rude Stone Monuments*, pp. 182, 183. The lower limb of the cross is imperfect, but there were evidently two rings round the chamber, the inner being of small stones; and the opening in the outer, opposite the base of the cross, is flanked by two stones that may be door jambs or the rudiments of an avenue, or (as Fergusson preferred) an external interment. The diameter

of the outer circle is 60 ft. ; the monument is no. 27 in Petrie's list.

A good foreign example of a chamber with massive jambs at the entrance was excavated by Gustafson in 1887 in Bohuslen and illustrated in his *Norges Oldtid*, p. 33, fig. 113 and p. 38, figs. 132, 133. English examples are not so definite, but Thurnam speaks of 'the two large stones which in the best marked examples of these chambers form the door-jambs to the entrance', and gives some references in *Archaeologia*, xlii, 222, note *b*.

The four prostrate slabs at the south end of the barrow proved, when completely laid bare, of imposing dimensions ; and an east and west trench was dug to discover their original purpose. Not only were the sockets made for them in the chalk discovered with small lumps of sarsen to act as wedges at their feet, but on the northern edge of the trench, opposite the foot of the slab imme-

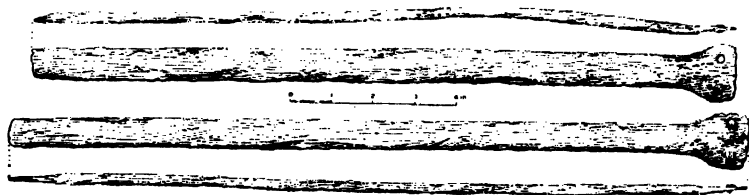


FIG. 2. Two iron currency-bars from Wayland's Smithy.

diately west of the entrance, two flat rods of iron were taken out together (fig. 2). They were lying parallel to the foot of the jamb, 1 ft. from the present surface, and looked like door-hinges, but the only perforations are in the expanded end of each, and another interpretation was needed. Though a novel variety of the type, they are evidently currency-bars of Early British origin, such as Julius Caesar described (*Bell. Gall.* v. 12), and no doubt saw during his invasions in B.C. 55-54. Apart from the expanded end the section is oblong and quite normal, the longer weighing when found $11\frac{3}{4}$ oz. and the shorter just over $12\frac{1}{2}$ oz. After cleaning and treatment to prevent further rust by Dr. Alexander Scott, F.R.S., at the British Museum, the weights are respectively 11 oz. 30 grains and 12 oz. 20 grains. The standard based on independent evidence is 11 oz. (4,770 grains = 309 grammes). Several papers have been published on the subject (*Proc. Soc. Ant.*, xx, 179, xxii, 338, xxvii, 69 ; *Archaeological Journal*, lxix, 424 ; and *Classical Review*, 1905, 206).

The discovery of currency on such a site inevitably leads to speculation. According to the legend, a traveller whose horse had cast a shoe on the adjacent Ridgeway had only to leave a

groat on the capstone, and return to find his horse shod and the money no longer there. But the invisible smith may have been in possession centuries before the Saxons recognized him as Wayland, and the ancient Britons of Caesar's time may have been in the habit of offering money here either in return for farrier's work or merely as a votive offering to the local god or hero. In Sicily a similar tradition can perhaps be traced back to the classical period (*Archaeologia*, xxxii, 324).

Whatever the motive, we have to explain how the currency-bars came to be buried at that particular spot, which was on the inner side of the enormous jamb and not accessible, even from the passage, when the mound was in existence. As matters now are, there is no reason why treasure should have been buried there rather than inside the chamber; but a votive offering deposited at the base of the largest standing stone would have been most appropriate, and the suggestion is that one of the jambs at least was standing about 2,000 years ago. On that theory we must also presume that the surface was then much as it is now, else the position would have been unapproachable without a deep excavation. In other words, the find of currency-bars not only points to a British predecessor of Wayland, but indicates that although this particular jamb was still standing, the long barrow had been already denuded to its present level in the first century before Christ.

Except for two capstones to cover part of the lower limb of the cross, all the stones of the chamber are accounted for. Though there is nothing to show when the capstones were displaced, it is probable that much of the damage was done on one occasion, possibly without the intervention of man. The capstone of the crossing was on a higher level than the rest, and probably was the only one visible on the original surface of the barrow. This huge slab has fallen and sunk into the ground on the north-east of the chamber. In its fall it also disturbed its neighbours, forcing the capstone of the northern arm between the eastern upright of that chamber and the northern upright of the eastern transept. In sliding down to the north-east it also tilted towards the south the northern upright of the northern limb of the cross, and depressed the north-west angle of the vast capstone that still covers the eastern transept. The weight of the central capstone is estimated at $1\frac{1}{2}$ tons, that still in position being about $3\frac{1}{2}$ tons. The capstone of the western transept has slipped off to the north, where it now lies, and the last capstone to the south has fallen and partly closed up the entrance to the chamber, its dimensions being 3 ft. 9 in. by 3 ft. 8 in.

It should be noted also that the capstone of the northern arm of the cross originally rested on top of the north and east uprights, but on a ledge cut on the inner face of the western upright, 9 in. from the top, on a level with the top of the others. The northern capstone was thus accommodated under the projecting edge of the large central capstone, to which it gave additional support. On the inner face of the south-east pier of what may be called the central tower were observed four circular depressions that might rank as 'cup-markings', but in any case they are not good examples, nor can their date be determined in relation to the chamber.

Wayland's Smithy may thus be said to have a history, certainly more than the later and more celebrated Stonehenge; and recent excavations have added largely to our knowledge of both monuments. Wayland, however, still retains some of his secrets; and if and when the omens are favourable, more may be done to lift the veil. For the present all concerned have done their best to answer King Alfred's question in his free translation of the *Consolations* of Boethius:

Ubi nunc fidelis ossa Fabricii manent?
quid Brutus, aut rigidus Cato?

'Where are now the bones of the celebrated and wise goldsmith Weland? Where are now the bones of Weland, or who knows now where they were?'

In the report on the human remains by Mr. Dudley Buxton, detailed measurements are recorded that need not be published in full. As will be seen later, nearly all the interior of the chamber had been previously dug over, but the lower levels of the western transept still contained some human bones in groups, though not in anatomical order. Here, as elsewhere, skeletons had been disturbed to make room for other burials, and it is probable that the dead were first buried outside and after a time disinterred, for the bones to be laid in the tomb reserved no doubt for the greatest of their time.

Here we found remains of perhaps eight skeletons, including one of a child, but their incompleteness points to a previous disturbance perhaps in neolithic times. The absence of thigh-bones in this case is remarkable, and only a few conclusions can be drawn. The best preserved skull belonged to an adult of middle age, probably male, with a cephalic index of 78.19, the mean indices of long and round barrow subjects being 74.93 and 76.70 respectively. It is therefore broader in proportion than the average brachycephalic Bronze Age skull, and may belong to an

intrusive burial after the introduction of metal. In Mr. Buxton's opinion the people buried in Wayland's Smithy did not differ to any great extent in physique from the more recent inhabitants of Berkshire. Certain differences from modern bones, due to habit, are striking, namely the pressure facets which may be all attributed to squatting, and the wear of the teeth, both of which are characteristics shared by primitive man and by modern savages.

Near the middle of the western skirt of the barrow, 3 ft. outside the line of standing stones and on the line of our trench BB, was found a skeleton buried in a crouched position, and lying on its right side, with the head to the north. It was only 18 in. below the surface, and had been partly destroyed, probably in digging for rabbits. It is pronounced to be that of a man of about 5 ft. $2\frac{1}{2}$ in., below the average height therefore, but with a cranium larger than usual. The muscular development is slight, and the teeth are less worn than those found in the chamber, with no trace of caries. The cephalic index is 77.72, indicating a slightly longer type of head than before, though both belong to a type living in England both in neolithic and modern times. In spite of a careful search, no grave furniture was found to give a clue to the date.

R. A. S.

II. THE EXCAVATIONS OF 1919-20

Much has been revealed by the few days' excavations which were made in 1919 and 1920, but the whole story is not yet told. The present account must be taken as an instalment, which we hope soon to supplement, and may well have to correct. The first season's work was directed primarily to a careful clearing of the passage and burial chambers, but it was also found possible to make progress with the verification of the plan of the barrow and to demonstrate that the theory of a circular setting of facing blocks was untenable. The second season brought the plan to its present state and threw considerable light on the construction of the barrow, leaving for further research the possible discovery of more facing slabs and any evidence which may remain of the north end of the barrow. For the present the estimate of 185 feet for the full length from north to south may stand.

The site is little if at all raised above its immediate surroundings, and the barrow was probably set out on level ground. The wider end, containing the burial chambers, is at the south, towards the Ridgeway. It is 43 ft. wide, and in it were set four large standing stones, which now lie prostrate in front of it.

Two of these stones were at the east and west angles respectively, the other two irregularly spaced between them, and the entrance to the grave chamber was between these two stones, though not, as it seems, on the long axis of the barrow, and therefore not in the middle of the south end. The stones, like all others in the barrow, are sarsens, and though not to be compared with the great stones of Avebury or Stonehenge, are yet of sufficient size to have formed an imposing front. The largest is 11 ft. long and 8 ft. wide, and must have stood between 8 ft. and 9 ft. high when in position, and all four must have projected above the contour of the barrow if, as there is reason to suppose, the highest capstone of the burial chamber was level with the top of the mound. The construction of the barrow can best be described under three heads: the mound, the revetment, and the facing.

The mound is chiefly composed of the chalky surface soil, but in the southern or head end of the barrow there is a considerable proportion of loose sarsen rubble, and this may have formed the principal material for the first 60 ft. from the south, the chalky soil being only used as a substitute when the supply of stone failed. The northern parts show only a few isolated groups of stones, and though this end has been more thoroughly robbed than the rest, it does not appear that they are the remains of a stone filling. One group, set on the original surface on the axis of the barrow, looks rather like part of the original setting out, and this is very nearly midway in the length of the barrow.

The revetment is formed of sarsen rubble, laid flat in irregular courses. A section midway in the barrow (fig. 4) shows it to consist of an inner and an outer face, the former about 2 ft. thick and the latter somewhat less, enclosing a core of hard chalk and soil, the whole being about 6 ft. thick at the bottom with a batter of about 45° on the outer face: just enough is left of the inner face to show at what angle it rose. Farther to the south, where there is much more stone in the core, the section is less clear, as regards an inner face, though it probably existed. The greatest height of the revetment cannot have exceeded 6 ft. at any time, and there are no evidences that it was ever carried right over the top of the mound.

The facing was composed of slabs of stone of an average thickness of 14 in. to 16 in., set upright along both sides and presumably the north end of the barrow. It will be seen that they were not set parallel to the revetment but, starting against its east and west faces at the south end, diverge from it northward. Eleven stones remain on the east side, of which all but four have been disclosed by our excavations. One is undisturbed in its original position;

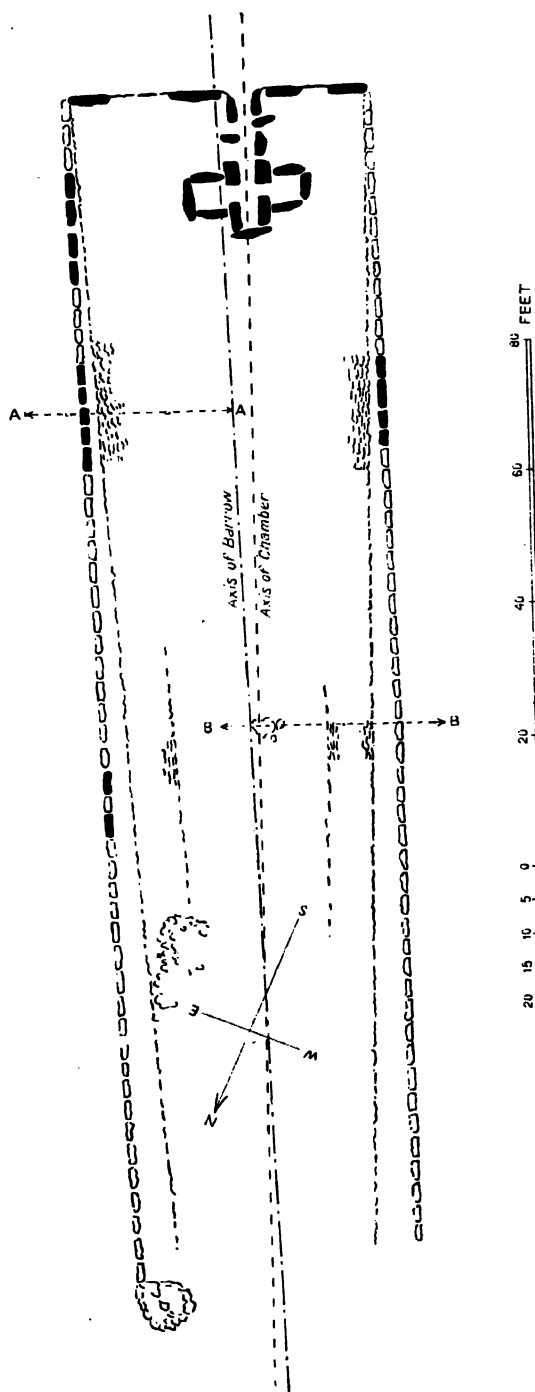


FIG. 3. Plan of Wayland's Smithy, as far as at present ascertained. Existing stones are shown in black, inferred stones in outline.
The plan is based on a survey by the Rev. Charles Overy.

four more are more or less upright, the rest have fallen outwards. On the west side only four stones, all fallen, have been discovered so far. It is notable that the filling between these stones and the revetment is of pure chalk unmixed with earth, in contrast to the material of the mound. The average height of the facing stones above ground-level was about 3 ft.

Is the barrow one work or of several dates? The divergence of the facing stones from the revetment suggests the possible addition of the former, but the most material argument is found

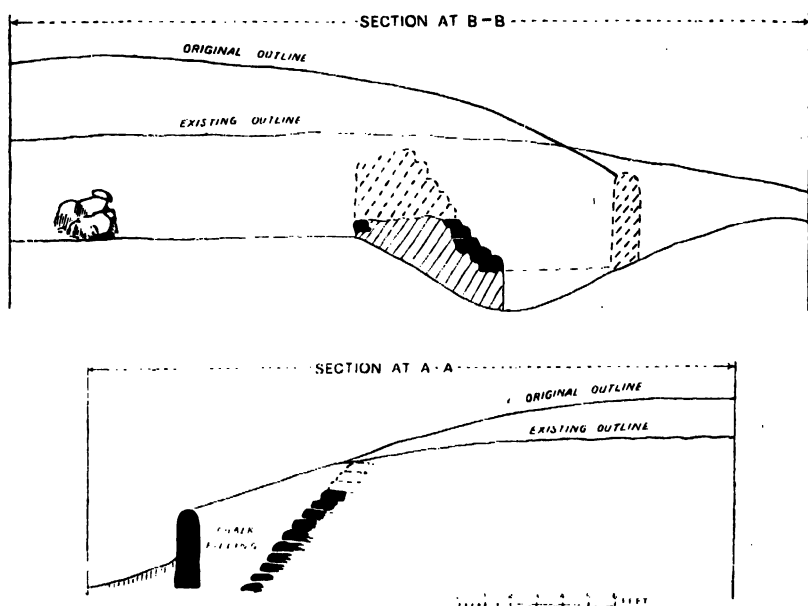


FIG. 4. Sections, showing revetment and facing slabs.

in the section (B-B). It appears that a ditch ran along the west side of the barrow, the revetment being on its inner slope, and at a level which suggests the partial filling in of the ditch when the revetment was built. The facing slabs would have made a further filling in necessary. The ditch was doubtless caused by the making of the mound, and it may be argued that the revetment is an afterthought, for if it had been intended from the first, room would have been left for it within the line of the ditch. On the east side of the barrow no ditch has so far been found, but excavations have not been carried down to the undisturbed soil. The divergent lines of the revetment and facing slabs have already been noted. At the south end of the barrow the revetment, if its general direction continued, would come practically to

the east and west angles, and the facing slabs would be set immediately against it. Constructionally, a space between the two is of value, as the slabs are ill-adapted to resist lateral pressure, and the revetment was intended to do the whole work of containing the mound. The chalk filling between the revetment and the slabs serves merely to carry on the contour of the mound. Here, again, it may be argued that if the facing slabs had been part of the original design, a space for them would have been provided in setting out the south end of the barrow, and they would have run parallel to the revetment.

The burial chamber consists of a passage 21 ft. long by 2 ft. 1 in. wide, open at the south end. Near the inner or north end lateral chambers open from it west and east, making a cruciform plan. The floor, where undisturbed, seems to be at the original level of the ground. The largest stones are the four which flank the openings to the east and west chambers, and the passage at this point would have been 6 ft. high to the under side of the capstone. The rest of the passage averages 4 ft. 6 in. in height, while the eastern chamber, the only part in which the capstone is still in position, was less than 4 ft. high. Seeing that this chamber is the origin of the cave legend, and the sole inspirer of Sir Walter Scott's romance, the value of imagination in archaeological matters is here aptly illustrated.

When it is remembered how much the body of the barrow has suffered, it is a most fortunate thing that so many of the stones of the grave are preserved. Of the uprights only one is missing and one displaced, while of the seven—or possibly eight—coverstones five are in existence, and one of them still in position. The stone which covered the north end of the passage is wedged in between the north-east upright of the 'crossing' and the capstone of the east chamber, which is still in position, though somewhat shifted in a north-easterly direction.

The capstones of the crossing and of the western chamber lie on the ground north of the grave, while the southernmost coverstone of the passage is now half buried in the ground in front of the original entrance.

The construction of the grave is on the usual lines. The upright stones are set in holes in the original ground surface, which, as far as we ascertained the depth, are comparatively shallow, but the strength to sustain the pressure of the mound against their sides was probably adequate when the monument was complete. The spaces between the stones were evidently filled with small dry-set rubble as usual. The northern stones of the two chambers and of the passage now lean inwards, but this has

probably occurred since the grave has been exposed. The construction of the southern part of the passage is interesting, there being on each side a stone set at an acute angle with the direction of the passage, and on the west side, at any rate, so much taller than the stones next it that it could not have served to carry a coverstone. I think that their object was to stiffen the side of the passage against lateral pressure, to which they obviously offer a greater resistance than the stones set with their long sides in the direction of the passage.

The one upright stone which is missing is the third from the south on the east side of the passage, and from the displacement of the soil here, and of the diagonal stone next to it on the south, and also from the loss of the cover-stones on this part of the passage, it seems that at some time an entrance has been forced into the grave at this point. There is nothing now to show how the passage was closed at the south end, but the outward curves of the two end stones are to be noted. The development of this feature is to be seen in the curves of dry-built walling flanking the entrances to the burial chambers at Stony Littleton, Uley, St. Nicholas, and elsewhere. It must be presumed that the south end of the barrow was built up in dry rubble between the standing stones, and there may have been, as at Uley, a deep lintel-stone over the mouth of the passage.

In a few instances, particularly on the inner faces of the east chamber, the stones have been carefully worked to a true face, with results which are precisely those obtained at Stonehenge.

We can hardly expect to bring the study of prehistoric tooling to anything like an exact science, as, within limits, we can do with medieval tooling; but instances of this sort multiply, and it would be interesting to compare the dressing with the tooling at Maeshowe in the Orkneys and elsewhere. We may suppose that flints or hard stone would be the means by which such marks were produced.

The barrow when complete must have appeared as a very low and flat mound limited by the line of facing slabs. But the discovery of the contracted burial outside this line shows that the soil of the mound had extended beyond the slabs at an early date.

The rectangular plan of the barrow has a parallel in that of the chambered mound at St. Nicholas, near Cardiff, which was fully explored by Mr. John Ward, F.S.A., and described by him in *Archæologia Cambrensis*, 1915, 6th Ser., vol. xv, pp. 253-320. The barrow, being in a district where stone is plentiful, is composed of stone slabs of various sizes throughout, and has a dry-stone

revetment built in level courses to contain the substance of the mound, with a vertical outer face, the upright slabs which are so noticeable a feature at Wayland's Smithy being absent. The construction is less calculated to sustain a thrust than the battering revetment described above, and Mr. Ward found that it had been pushed outward in many places. In the St. Nicholas barrow occur lines of stones set upright in the body of the mound, evidently to serve as stiffeners to the mass of rubble, and though nothing of exactly this character occurs in Wayland's Smithy, certain isolated heaps of stone may be the remains of some setting out of the same nature. Stone, except in the form of sarsens, is absent from the district, and earth and chalk formed a far larger proportion of the Berkshire barrow than the soil and clay found in its Glamorganshire parallel.

Another barrow which seems to have been rectangular is that of Coldrum, Kent, described in the *Journal of the Royal Anthropological Institute* for 1913, p. 76. There appear to have been facing slabs along the sides of the mound, which is now in a very ruinous condition. The proportions are very different from the normal; it appears that with a width of some 50 ft. the length was about 80 ft. Only the inner end of the grave chamber remains, and the entrance, which was at the east, is quite destroyed.

C. R. P.

DISCUSSION

MR. D'ALMAINE said he had been studying the monument for seven years, and had collected material to elucidate its problems. The machinery had to be devised and set going, the result being that the Smithy had been not only explored but reported on; and he hoped it would be permanently protected. His first motive was to prevent the sarsens being split by picnic-fires, a danger that had not been met by scheduling it in 1882 or putting it under the Act of 1913. The Inspector had given him encouragement, and he desired to express his obligations to the Earl of Craven and his agent, Mr. Beresford Heaton. Mr. Overy's plans and photographs of the excavations had been invaluable, and he looked forward confidently to the day when the enclosure would be handed over to the nation.

THE PRESIDENT said the joint paper was one of special interest and contained enough romance to stir the imagination of all present. The legend was familiar enough, but it was surprising to find that money-offerings at the monument might go back to Caesar's time; and the survival of the legend was all the more extraordinary, as there was evidently classical authority for it in the Mediterranean area. It was illustrated about A.D. 700 on the Franks casket in the British

Museum. With regard to the treatment of human bones after burial, he might refer to the inclusion of more than one skeleton in the large Bronze Age jars of southern Spain discovered by the brothers Siret. Recent research had seriously damaged Scott's reputation as an archaeologist, but had not fixed the date of disturbance by treasure-hunters. The use of the iron bars as currency was highly probable and their identification was due, in the first place, to Mr. Reginald Smith. The cruciform plan was yet another argument against regarding everything in the shape of a cross as of Christian origin. Thanks were due not only to the authors but to Mr. d'Almaine for his initiative and excellent models; to Mr. Overy for his measurements and photographs; to Mr. Buxton for examining the bones; and to the subscribers for their enterprise in the cause of archaeology.

The Dorian Invasion reviewed in the light of some New Evidence

BY STANLEY CASSON, M.A.

[Read 10th March 1921]

THE Dorian invasion, as an episode in Greek history, exhibits few complexities. Ancient tradition is unanimous upon the fact that the invasion was at once a more or less definite event or series of events in time and a clear turning-point in historical development. Modern historians of ancient Greece have largely twisted the comparatively clear tradition of antiquity into a variety of theories,¹ and the whole question in their hands remains a problem which from their point of view is still *sub iudice*.

Archaeological research on the other hand, as is not infrequently the case, serves to amplify and explain the ancient traditions in a more satisfactory way. No very clear attempt has as yet been made by archaeologists to establish the facts of the Dorian invasion² or to track down the historical Dorians. But the results of recent research in the Peloponnese on sites where tradition places the Dorians in fullest force points to a culture at these sites which, appearing about the eleventh century B.C., has all the characteristics of the culture of an invader, and differs radically and completely from what we know to have been mainland culture³ during the millennium preceding the eleventh century B.C.

The purpose of this paper is to review the archaeological evidence concerning the Dorians in the light both of the literary tradition and of some new archaeological discoveries.

But before examining the archaeological evidence it would be best to summarize the literary tradition.

1. *The literary tradition.* In using the literary traditions it will

¹ See, for instance, the curious theories of L. Pareti in *Storia di Sparta Arcaica* (Florence, 1917). He dates the beginning of the Dorian invasion in the 15th century B.C. and the end of the Late Minoan III period at 900 B.C. (pp. 139-140), believes that the Dorians were also called Achaeans (p. 87) and that they have nothing to do with either the destruction of Mycenaean culture or with the growth of 'Geometric' art.

² But see *The Early Age of Greece*, *passim*, and *Anthropological Essays presented to E. B. Tylor*, 1907, p. 295, 'Who were the Dorians?'

³ Wace and Blegen, *B.S.A.*, xxii, pp. 175-89.

clearly be best for the purposes of this paper to draw only from the best and clearest sources.

The Dorians, says Herodotus,¹ were new-comers (ἐπήλυδες) to the Peloponnese. Pausanias, speaking generally of the Dorian invasion, says that it 'threw the whole of Peloponnese except Arcadia, into confusion'. Later, in his eighth book,² Pausanias gives a clear and explicit account, based on what seems to be Arcadian tradition, of the two waves of the Dorian invasion in the time of Echemus of Arcadia. 'The Dorians', he says, 'in attempting to return to the Peloponnese under the leadership of Hyllus, son of Heracles, were defeated in battle by the Achaeans at the Isthmus of Corinth.' Later the Dorians made a second attempt in the time of Cypselus, king of Arcadia. 'This time they came not by the Isthmus of Corinth as they had done three generations before, but in ships to Rhium.'

It is thus clear that the invasion was in two separate streams, each apparently independent of the other both in time and geography. We have the record of at least a century of invasion—'three generations' says Pausanias. The main tradition preserved is clear and explicit and such as might well have survived in Arcadia, which, partly from its position between the two streams of invasion, partly from its mountainous and inaccessible nature, and partly from its pacific attitude to the invaders,³ seems to have escaped the rigours of the invasion. The points of entry of the successful and of the unsuccessful attempts upon the Peloponnese fall on the line of the two main routes from north to south, which lie on each side of the *massif* of the north Greek mainland.

Rhium is the most northern point of the Peloponnese, at the narrowest part of the Gulf of Corinth, and is the natural bridge-head for invaders who have reached the Gulf by the western route from the north by way of Stratos, the Ambracian Gulf, and Dodona. Unfortunately we have no clear tradition as to the halting-places of this stream of invaders; the fact that Rhium alone is mentioned gives a certain verisimilitude to the suggestion made above that this tradition is Arcadian. Theorizing by later geographers or historians would have produced a far more exact itinerary. The account of Pausanias is just the type of story that one might expect him to find still current in Arcadian folk-lore. The Cromwellian wars in England have left traditions of a similar type behind them among the English country people.

The other stream of invasion, though it met with a check at the Isthmus, must have succeeded later. It clearly came from the direction of Thessaly and the north by way of the Boeotian plains,

¹ viii. 73.

² ii. 13. 1.

³ See Paus. viii. 5. 6.

north Attica, and the Megarid. The Isthmus would be its natural objective. One of its halting-places is mentioned in a well-known passage by Herodotus, where he states¹ that the Dorians in the time of Deucalion dwelt in Phthiotis and moved later to Histiaeotis. Later still they moved to Pindus and there dwelt under the name of Makednoi.² Pausanias³ says that the Dorians came from Oeta, and mentions the Dryopians as though they were similar invaders, saying that they came from Parnassus.

So much for the best and principal elements of the literary tradition. The facts which emerge are few:

(a) The invasion came from the north and lasted at least a century.

(b) The invaders came in two streams, one on the west and one on the east. That on the west met with no opposition. That on the east seems to bulk more largely in tradition, and although the one specific incursion mentioned by Pausanias was checked at the Isthmus, there can be no doubt that large bodies of invaders penetrated by this route. The mention of halting-places about Pindus, Histiaeotis, Phthiotis, and Oeta show how much record of this route was preserved. The absence of mention of place-names on the other route is significant.

2. *Archaeological evidence.* At the outset any estimate of the archaeological evidence must be conditioned by one simple consideration. In looking for archaeological evidence of Dorians how can we know what to look for if our only knowledge of Dorians is gleaned from literary tradition? To assume that certain types of object are Dorian and then to infer from their distribution the extent of area occupied by their makers would be a *petitio principii* in its worst form.

But the fallacy can be avoided. We must first fix on a site where the Dorians are universally placed by tradition. If there we can establish a stratification which belongs neither to the Mycenaean or sub-Mycenaean period, nor yet to that of Hellenic culture proper, then that stratification will, perforce, belong to some intermediate period. The only culture of importance belonging *by ancient tradition* to this intermediate period is that of the Dorian invasion. It follows, then, that every object found in such strata belongs to that culture.

With a series of objects thus attributed we can search for

¹ i. 56, repeated by Steph. Byz. s. v. Δῶριον.

² Elsewhere (viii. 43) Herodotus says that the men of Sicyon, Epidaurus, and Troezen are Δωρικὸν τε καὶ Μακεδνὸν ἔθνος, having come latest of all from North Greece.

³ v. 1. 2.

similar objects and strata in other parts of Greece. Our conclusions will show to what extent the distribution of such objects agrees with the literary records.

The obvious place to look for such a site where these conditions may be found is clearly Sparta. From what direction the Dorian invaders reached this town and consequently from which of the two streams of invasion they came will remain uncertain. In all probability they came by both streams.

The fact remains that some time in the Dark Age of Greece, between the fall of Mycenaean power on the mainland and the rise of Hellenic civilization proper, the Dorians reached Sparta. Whether they were the destroyers of the Mycenaean culture of the mainland or not is a problem which will be dealt with below.

The evidence of archaeological excavation at Sparta is precise and complete. These excavations were carried out in the years 1907-10 by the British School at Athens, and showed beyond dispute that the Mycenaean site in the plain of Sparta had come to an end with the fall of the culture it represented, remaining deserted and unbuilt upon. Subsequent inhabitants of the plain started afresh on and near the rocky hill that later became the Acropolis of classical Sparta. The Mycenaean town, abandoned and empty, fell into ruins. Both on the summit of the Acropolis, on the site dedicated to Athena Poliouchos or Chalkioikos, and below on the banks of the Eurotas at the site later associated with the cult of Artemis Orthia, stratified areas were found. In each case the stratification was clear and began from the natural rock, a starting-point that is always an indisputable fact in a stratification. Of the two sites¹ that of Athena Chalkioikos seems to have been the older.² The lowest stratum here contained no bronzes³ and only fragments of so-called geometric ware. This stratum can be roughly dated to the tenth century B.C.,⁴ while the similar stratum at the Artemis Orthia site belongs more to the ninth century. These dates are arrived at from internal evidence by the establishment of a central chronological point in the stratification⁵ and allowing a period of 150 years for all the preceding strata.⁶

The latest part of the lowest stratum contained bronze ornaments of geometric type—figures of horses and birds, crude and

¹ Referred to hereafter as that of Athena Chalkioikos and Artemis Orthia respectively.

² *B.S.A.*, xiii, p. 72 and p. 145.

³ *Ibid.*, p. 111.

⁴ *Ibid.*, p. 72 and p. 136.

⁵ viz. certain 'spectacle' brooches of bone, which are identical with some found at Ephesus and there dated at 700 B.C.

⁶ *B.S.A.*, xiii, p. 72 and chronological diagram p. 61.

elementary and closely resembling drawings on geometric vases of the same date. The importance of these ornaments will be seen later. The figures of horses in particular seem characteristic of

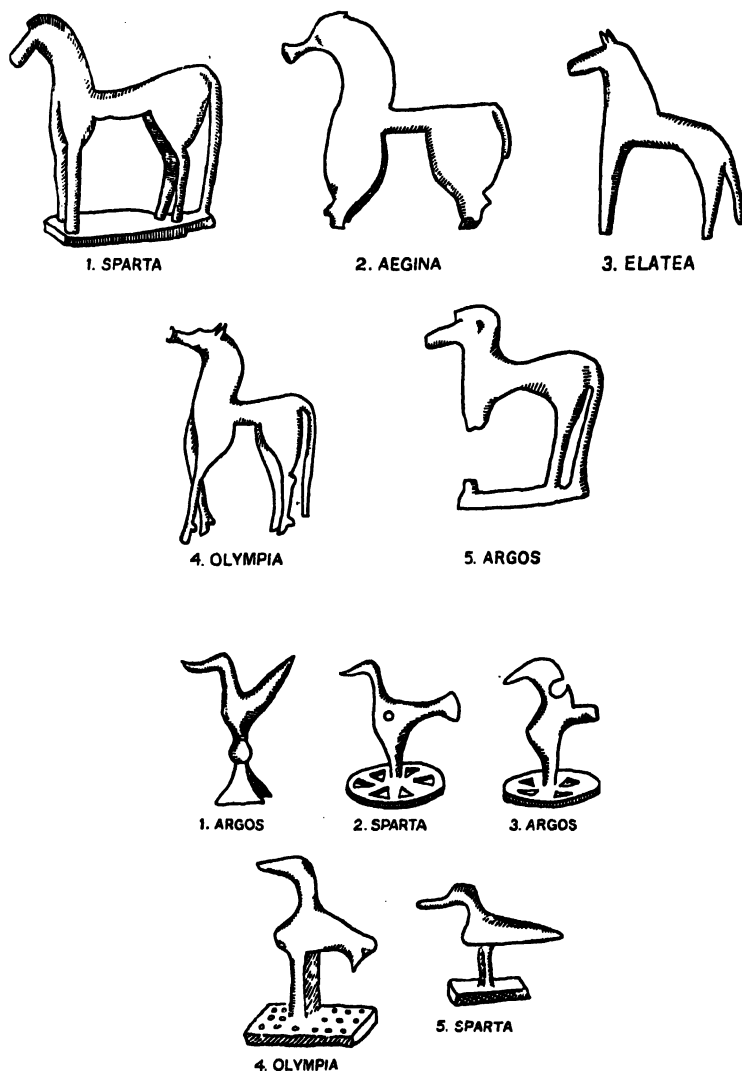


FIG. 1. Bronze Horses and Birds from various sites in Greece.

this culture. They are distinguished from other similar figures of horses of other periods by their narrow waists, bottle-shaped muzzles, long tails, and broad flanks (see fig. 1).

A further discussion of these early strata is unnecessary. The conclusions for the moment alone are of importance. We have

established a stratification in two separate sites at Sparta, which is dated by the excavators on its own internal evidence at the ninth and tenth centuries B.C. Mycenaean culture, both at Sparta and at most other places on the mainland, comes to an end somewhere about the eleventh century B.C., a date recently confirmed both for Mycenae itself¹ and for most of the Mycenaean sites of the mainland. There was at Sparta, as the excavators say², 'a complete break of continuity between Mycenaean and classical Sparta, bridged over only by the persistence on the earlier site of the cult of the old hero Menelaos'. We have thus a *terminus post quem* for the dating and classification of the remains of a new intrusive culture that established itself at Sparta early in the tenth century B.C., and which must have reached there still earlier, for invaders do not sit down at once in peaceful occupation. A period of at least fifty years should be allowed from the time of the arrival of the invaders to the time when they were so firmly established at the earlier of the two sites mentioned above as to leave appreciable traces of their residence. We thus reach the period 1050-950 B.C., for the main force of the invasion of the Spartan plain. In default of rival claimants of this period the invasion can only be attributed to the Dorians, who came, according to Greek tradition, between the end of pre-Hellenic and the beginning of Hellenic things. Old systems of dating, based on such traditions, usually put the Dorian invasion between 1124 and 1104 B.C.³

With these facts established, an examination of the chief sites of the northern mainland and the Peloponnese may lead to important conclusions.

The sites have here been grouped into a northern, a western, and an eastern group.

Western Group

Dodona. This site has been but scantily explored and slightly published. Enough has been found, however, to testify to the presence there of elements of geometric culture. Bronze 'spectacle' brooches of various types and figures of horses of the Spartan type have been found.⁴ More remains to be discovered, and it is probable that the geometric culture will be found to be well represented there.

¹ *Times Literary Supplement*, 19th August 1920.

² Dawkins in *B.S.A.* xvi, p. 11. Cf. Peter, *Chron. Tables*, 8.

³ Summarized in Clinton, *Fasti Hellenici* ii (1841), pp. vi-viii.

⁴ See nos. 223, 296, 300 (spectacle brooches) and 640, 645, 646 (horses) in the National Museum, Athens. These have not been published by Carapanos, *Dodone et ses ruines*, Paris, 1878.

Thermon. Excavations carried out here in 1913-14 by M. Romaios produced among other objects two good examples of geometric ornaments, a bird and a horse respectively identical with the Spartan types.¹

Olympia. The geometric site here seems to have been very extensive. A large number of bronze ornaments of the Spartan

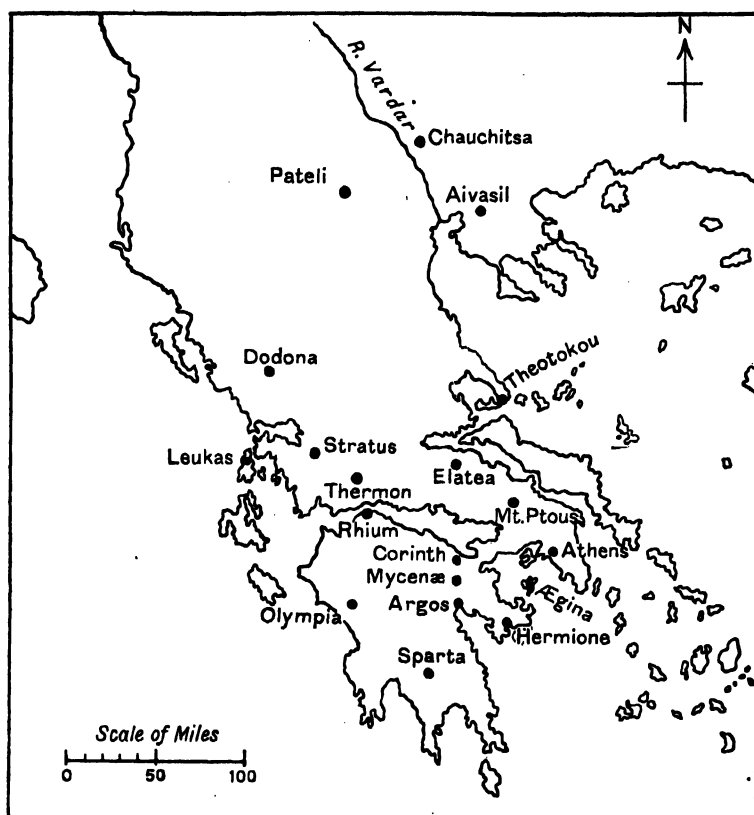


FIG. 2. Sketch map of Greece showing sites quoted below.

types, particularly horses and birds, were found, and geometric pottery was abundant. Unfortunately the pottery and the stratifications in which it occurred, as in the case of so many German publications of early sites, remain unclassified and so cannot be adduced as evidence. The bronzes, however, afford close parallels with those from Sparta, particularly in the case of the figures of horses which show the same pinched waists, arched necks, broad

flanks, and long tails in each instance.¹ Every phase of Dorian art, if art it can be called, seems to have been represented at Olympia. The analogy of the Spartan bronzes shows the Dorian origin of the Olympia examples, for, as we have seen above, the former must be associated with the culture known as Dorian.

The view of Dörpfeld that the Olympian bronzes belong partly to pre-Mycenaean times, to the earliest culture of the Achaeans before, as he says,² they came into contact with Cretan and Mycenaean influences, is disposed of by the Spartan evidence. The inferences implicit in this view as to the alien origin of the Achaeans and the radical difference between them and the makers of the Mycenaean culture of the mainland open too large a question for discussion here. Ridgeway's similar view³ that geometric art existed in the Peloponnese before the Dorians arrived is rendered equally untenable by the Spartan evidence. Geometric art does not appear in Mycenaean times at Sparta, and no other intrusion appears after this art was established there. If the Dorians were not responsible for it, no other authors can be found, certainly not Achaeans.

Leukas. Similar bronzes to those found at Olympia and Sparta were found here by Dörpfeld during his excavations on the site known as Chortata.⁴ A bronze horse and bronze pins of the usual Spartan and Olympian types were found. I have not seen the actual objects and I cannot find illustrations of them, but it seems clear from Dörpfeld's description that they are of the geometric type; in fact he calls the Leukas horse a 'Dipylon-Pferd', a description which at any rate indicates its type. Other general similarities are drawn by Dörpfeld between the finds of Leukas and Olympia.⁵

¹ *Olympia*, Bronzes, pl. XIV. nos. 201, 216, 222, 223, and cf. with *B.S.A.* xiii, p. 111, fig. 2, e.g. (Sparta). Cf. also *Olympia*, Pl. XI, 158, with Sparta *loc. cit.* fig. 2. f.

² *Ath. Mitth.* 1906, p. 206, 'Meines Erachtens haben wir in den "geometrischen" Gegenständen dieser ältesten Schicht den ursprünglichen Stil der Achäer zu erkennen, den diese seit Alters besaßen, bevor sie die vom Osten kommende kretische und mykenische Kunst kennen gelernt und zum Teil angenommen hatten', and p. 207, 'Die Bronzen und Terracotten des "europäisch-geometrischen" Stiles . . . gehörten dann nicht ausschliesslich in die nachmykenische Zeit . . . sondern . . . konnten zum Teil sogar vormykenisch sein', and p. 217, 'In dem alten Heiligtume von Olympia und in der Stadt des Odysseus auf Leukas haben die Achäer ihre uralte geometrische Kunst lange bewahrt; fremde Kunstgegenstände finden sich dort in der ältesten Schicht nur vereinzelt', etc.

³ 'Who were the Dorians?' p. 296.

⁴ *Ath. Mitth.* 1906, p. 208. Dörpfeld here dates them at 1500-1000 B.C. See also *Der sechste Brief über Leukas-Ithaka*, 1911, p. 19.

⁵ *Ath. Mitth.* 1906, p. 208.

Eastern Group

The objects found at sites grouped under this heading are, as in the preceding group, here dealt with from the point of view of the Spartan finds, and considered from the point of view of the historical conclusions drawn as to those finds.

Thessaly. Graves dug near Theotokou in Magnesia, near Cape Sepias, by Messrs. Wace and Droop, contained pottery of an elementary geometric type. This style of ware seems to have been the result of a fusion of Mycenaean and geometric influences which took place early in the second Late Minoan period. The geometric influence was, perhaps, due to an invasion coming from Epirus over Tymphrestus 'and the later waves of geometric influence which seem required for the full Dipylon style may well have originated in the same direction. On the other hand, the Early Iron Age vases from Pateli, on Lake Ostrovo,' seem to indicate an origin more directly to the north'.² Thessalian sites proper remained deserted in the period after the Theotokou burials were made.

An important series of burials of the geometric period was excavated at Halos by Messrs. Wace and Thompson. They suggest as a date the ninth century B.C. The pottery differs very considerably from that of Theotokou and seems later in date.

Elatea. Amongst the objects found during the excavation of the temple at Elatea in north Boeotia in 1884 a sufficient number of geometric bronzes occurred to justify the conclusion that the site was fairly extensively occupied by representatives of this culture. Standing as it does at the northern entrance to the Boeotian plain, Elatea would clearly lie on the main track of invaders from the north. Several good examples of bronze birds and a characteristic bronze horse³ were found.

Mount Ptois. A few examples of geometric bronzes have been found on the site of the temple of Apollo here, notably one of the characteristic horses of geometric style.

Athens. Bronzes in large numbers have been found in the pre-Persian strata on the Acropolis identical in type with those from Sparta. There are ten good examples⁴ of horses, many birds, and other ornaments. Geometric pottery also occurs on the Acropolis. A later but close and important parallel between Sparta and Athens is found in the case of seven ivory

¹ See *B.S.A.* xxiii, p. 30.

² Wace & Thompson, *Prehistoric Thessaly*, p. 216.

³ B. Paris, *Élatée*, 1892, p. 286, fig. 25, p. 285, fig. 24, and figs. 32-34, and National Museum Athens, nos. 14571, 14594.

⁴ Cf. *B.S.A.* xiii, p. 111, fig. 2, e.g. with De Ridder, *Catalogue des Bronzes trouvés sur l'Acropole d'Athènes*, nos. 485, 487, 489-492, 495, 501.

figures which have all the characteristics of the latest development of geometric art at Sparta.¹ Six of these figures were found in a tomb in the Dipylon, in a grave with characteristic geometric pottery of the type which has made the Dipylon famous in archaeology. The seventh comes from the Acropolis.²

The significance of the whole Dipylon site and its Dorian characteristics involves important historical considerations which will be dealt with below. For the moment I am concerned with the facts alone.

Aegina. Geometric culture is well represented on the site of the temple of Aphaia excavated by Furtwängler. Pottery is perhaps our best evidence,³ but there is a particularly good example⁴ of the type of bronze horse which seems to be so characteristic of this culture.

Mycenae. The evidence from this site is of a different nature from that of the other sites and is, if anything, more satisfactory, since Mycenae was re-excavated in 1920 in the light of the Spartan and other discoveries. The results are consequently more important from the historical point of view. A careful examination of the stratification near the Lion Gate showed that the latest Mycenaean deposits were covered with, and partly included in, a thick burnt stratum and other signs of destruction which indicated the ruin of the city at the very end of the third Late Minoan period, that is to say, between 1200 and 1100 B.C. Above this stratum occurred another stratum, formed by habitation, containing pottery both of the geometric type and of an intermediate type midway in point of style between the latest Mycenaean wares and the earliest geometric. From this stratification it was clear that the city had been sacked and burnt somewhere about 1150 B.C., and that it was reoccupied soon after by people whose culture resembled that of the earliest post-Mycenaean inhabitants of Sparta.

Argos. Evidence from the site of the Heraeum as to the culture, traces of which have been found at the sites dealt with above, is abundant. Seven bronze horses of the Spartan type were found⁵ as well as other animals of the geometric type. Bronze birds of the usual geometric stylized type were numerous.⁶

¹ *B.C.H.* xix, p. 273 & pl. IX. cf. with *B.S.A.* xiii, p. 80, fig. 18a and other similar ivories.

² *B.C.H.* xix, fig. 17, p. 294.

³ Furtwängler, *Aegina*, pl. 125.

⁴ Furtwängler, *op. cit.* pl. 113, w.

⁵ Waldstein, *Argive Heraeum*, pl. 72, 8-12, pl. 73, 13, 14, pl. 74, 17.

⁶ Waldstein, *op. cit.* pl. 77, 42 & 76, 40, cf. with *B.S.A.* xiii, p. 111, fig. 2, d, b, respectively, see also the other examples shown on those plates.

Pottery evidence is also abundant. A further parallel to Sparta is seen in the case of a fine bronze brooch of the 'spectacle' type.¹ Parallels of a later date are seen in some ivories, notably an ivory 'spectacle' brooch² and some seals similar to those of the eighth century B.C., found at Sparta.³

Northern Group

Lake Ostrovo. Almost midway between the Adriatic and the Aegæan and a little to the east of Heraclea Lyncestis (Monastir), an important discovery was made at Pateli near the village of Sorovitch.⁴ Eighty-nine rough earthenware vases were discovered and a large number of 'spectacle' brooches of the Spartan type. The pottery, on the other hand, showed no very close affinities with known types of geometric wares and seems, on the whole, to indicate local variations.

Kalindolia. At the site near the modern hamlet of Chauchitsa, which I have recently suggested⁵ is the ancient Kalindolia of Ptolemy, a cemetery covering a period from neolithic to Roman times was discovered in 1918 during the course of military operations. The bulk of the objects found there (now in the British Museum) I published in the *Annual* of the British School at Athens for 1919.⁶ The objects to which I wish again to draw attention in this article are the bronze 'spectacle' brooches of the Spartan type, which should be compared with those from other sites already described. A further group of objects from the same site reached England independently, and is now in the Royal Scottish Museum, Edinburgh. I am indebted to the director, Mr. A. O. Curle, for the photographs here reproduced and for permission to reproduce them.

The plates represent the contents of three graves and a group of miscellaneous objects from the same site, including a sword. The importance of the objects in view of the above evidence is at once clear. The objects were all found during military operations,

¹ Waldstein, *op. cit.* pl. 85, 818, cf. with *B.S.A.* xiii, p. 113, fig. 3, b, d, e; it should be observed that this brooch differs from the Spartan examples in consisting of wire, a section of which would be rectangular and not circular. The same peculiarity occurs in the Pateli brooches. See also Waldstein, *op. cit.* pl. 84, 817 a, b, 819, 820.

² Not given in Waldstein's plates, but in the National Museum, Athens.

³ Waldstein, *op. cit.* pl. 139, 1-3, cf. with *B.S.A.* xiii, fig. 24, b-e, p. 90.

⁴ This find has not been published, but see *B.S.A.* xxiii, p. 30 & p. 32, note 1.

⁵ *B.S.A.* xxiii, p. 36.

⁶ *B.S.A.* xxiii, p. 32 & 36-38, & pl. vii, viii.

which involved a partial clearance of the site. Certain evidence as to the circumstances of their discovery is available, but it is, of course, not as complete as that which a scientific excavation would have produced.

Group A, plate VI, fig. 1, belongs to a burial by inhumation. The body had been covered with a cairn of stones and was extended on the back with the feet to the east. The pendants, namely a miniature jug and the horse, both of bronze, were, together with the large single bead, round the neck. The heavy bronze armlets were placed one on each upper arm. The small bracelets were near the wrists. The string of bronze beads was on one wrist. The twisted wire rings, which are of gold, were on the fingers.

Group B, plate VI, fig. 2, belongs to a burial by inhumation with the body extended so that the feet pointed to the south-west. The necklace, which is of bronze beads with a central bead of clay, and the small bronze bird pendant were round the neck. The heavy bronze armlets were placed one on each upper arm. The large 'spectacle' brooch was on the right shoulder. The position of the gold plaque was not ascertained.

Group C, plate VII, fig. 1, was also from a burial by inhumation. The body was extended with the feet to the south. There were remains of a spiral bronze chain, which was much decayed, across the chest and round the neck. The four bronze ornaments were on the chest together with the bronze bead. The position of the bronze armlet and of the plaque and spiral, which are of gold, was not ascertained. There were fragments of iron and bronze near the left side.

The objects on plate VII, fig. 2, were found at various places on the site, not associated with identified graves. Nos. 1, 3, and 8 are spiral finger-rings, no. 3 being of gold. Nos. 5, 6, 7, are bronze brooches of known geometric types. No. 9 is a heavy ring and no. 10 is a bronze armlet; nos. 12-15 are bronze beads of the type found in the other graves and in most geometric sites in the mainland of Greece. No. 11 is a bronze ornament, perhaps of classical date.

Perhaps the most important of all the discoveries is a short sword with an iron blade and a bronze hilt (fig. 3).

The similarity of the culture responsible for all these things to that which produced similar objects at Sparta, Athens, Aegina, Olympia, and the other sites is at once obvious. The horse from grave A is identical with the geometric horses in fig. 1. The 'spectacle' brooch and the little bird pendant from grave B, the gold spiral fragment from grave C, and the brooches and spiral



Fig. 2. GROUP B FROM KALINDOIA.

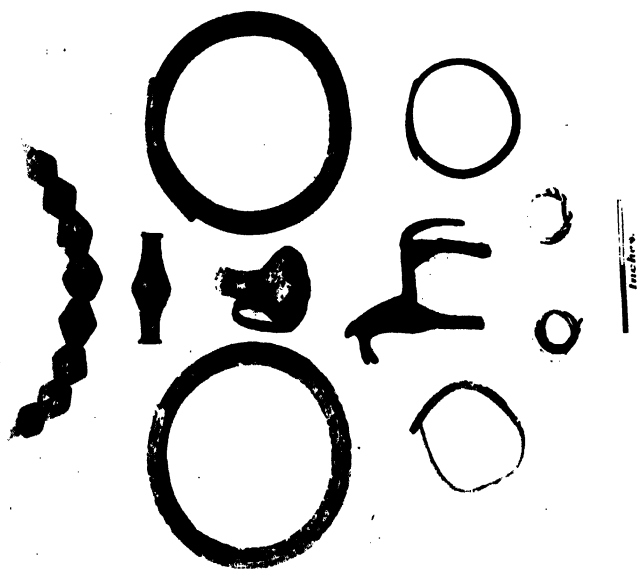
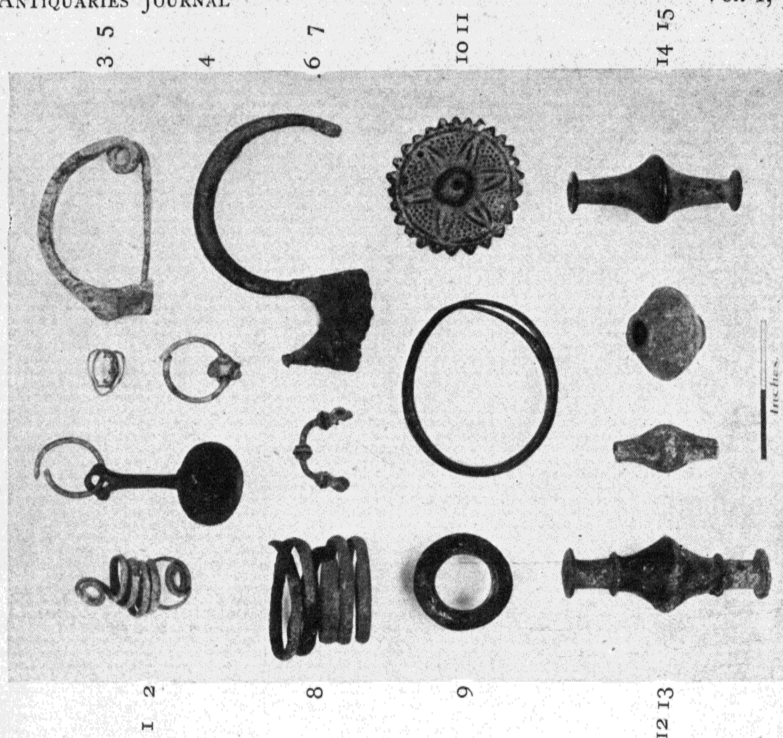
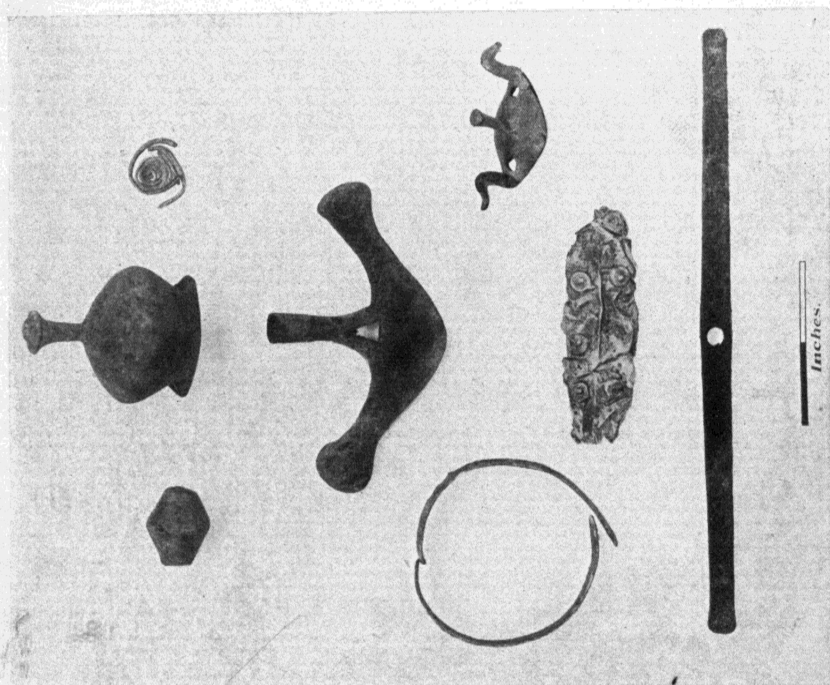


Fig. 1. GROUP A FROM KALINDOIA.



fragments from the miscellaneous group are all characteristic of this geometric culture.

The sword is perhaps the most important of all because it gives a clue as to the origin of the people of this culture. It is of the type usually known as the 'antenna' type. The distribution of this type of sword¹ covers a wide area. It has been found in Central and Southern Europe in a region extending from Denmark and England on the north to Central Italy on the south and from midway between Vienna and Munich on the east to Lyons on the west. Many are recorded from Switzerland. This example from Macedonia is the most southern example yet found.

Aivasil. A group of burials near the village of Aivasil or Haghios Vasileios, on the south shore of Lake Langaza, about twenty-five miles south of Lake Doiran, shows other close affinities to the geometric culture. The objects found here were excavated by Professor Ernest Gardner in 1916 and have been published by him.² A double-spiral 'spectacle' finger-ring of bronze and a geometric brooch give the connexions with the South, while an amber bead emphasizes the Northern influences already indicated by the 'antenna' sword from Chauchitsa. Both these sites fall into the same cultural area and should be considered together; an earthenware *kothon* in one of the Aivasil graves dates it as late as the sixth century B. C. Chauchitsa as we have seen covers a large period from Neolithic to Roman times.



FIG. 3. Sword from Kalindoia.

¹ See Naue, *Die vorrömischen Schwerter* (1903) pl. xxxiv-xxxvi.

² *B.S.A.* xxiii, p. 21.

Conclusions

The object of this paper is not so much to catalogue archaeological discoveries as to arrive at some more or less clearly defined historical conclusion based on good archaeological evidence. The main points are the date of the Dorian invasion, the direction whence it came and the ways by which it entered Greece, and the nature of the art or culture characterizing Dorians. Literary tradition must throughout be used to check or amplify the material evidence.

The first and most important aim was to associate the term Dorian with discovered objects in order to establish the premiss 'this is Dorian'. This was effected by the stratigraphical evidence of two sites, Sparta and Mycenae. It was seen that at Sparta the period between the end of things Mycenaean and the growth of things Hellenic (such as the actual temple-buildings of Artemis Orthia and Athena Chalkioikos), that is to say, between about 1050 and 800 B.C., showed the appearance and steady development of a culture, distinguished by objects of pottery and bronze, known as geometric. In other words, a new start was made at Sparta between 1050 and 950 B.C. and a steady development took place with a clear advance and improvement of artistic ideas down to historical times¹ without any trace of other invasions at a subsequent date, or of any alien domination. If we search our archaeological records as far back as the middle of the tenth century B.C. we find no hiatus in historical development, no gap into which we can fit the latest of the recorded invasions of Greece, namely, that of the Dorians who, says Herodotus,² are ἐπὶ ἡλυδες—'new-comers.' We are driven, therefore, to attribute the latest great invasion of Greece (before that of the Persians) to the time of the last radical change of culture recorded by archaeology. It must, then, have been the Dorians who sat down on the banks of the Eurotas and on the acropolis of Sparta, and there started the two most famous sanctuaries of that city. The earliest remains characteristic of these Dorians were, as we have seen, the so-called geometric pottery and bronze ornaments, of which small figures of birds and horses, highly stylized, seem most

¹ Ridgeway, *l.c.* 296, gives the precise date of 1104 B.C. for the Dorian invasion despite the evidence of Pausanias, who shows that it lasted at least a century. The artistic growth of Sparta, of course, closed down abruptly in the sixth century B.C. owing to a change of internal policy and the rise of a militarist aristocracy who considered that Art and Empire were uncongenial companions.

² viii. 73, cf. viii. 43 where the inhabitants of certain towns are said to be Δωρικόν τε καὶ Μυκεδόνων ἔθνος, ἐξ Ἐπινεοῦ τε καὶ Πίνδου καὶ τῆς Δρυοπίδος ὑστάτα ὀρμηθέντες. This was the latest phase of the invasion.

characteristic and most strongly to retain certain artistic conventions. Among later developments of this art, carved ivories are the most striking instances of Dorian art improved by foreign influences.¹ We are thus in a position to answer the question, 'What is Dorian?' from the evidence of excavation.

Direction of the invasion. With our chief premiss established from the evidence of Sparta it becomes possible to arrive at some idea of the distribution of Dorian sites. This distribution, as has been shown, demonstrates the existence of Dorian culture in its more elementary stages along the west and east coasts of the mainland of Greece,² running in two lines from Dodona on the west and Magnesia on the east and meeting at an apex at Sparta. The continuation of these lines northwards is uncertain owing to the insufficiency of archaeological exploration in this direction. Enough has been found, however, to establish the existence of a small northern group of Dorian sites. This group indicates an extension of Dorian culture along a line running east and west, the base of the triangle whose apex is Sparta, a line which corresponds closely with the great prehistoric route from the Adriatic to the Aegean which later became the Via Egnatia.

A comparison of this distribution with the traditional outlines of the Dorian invasion, summarized at the beginning of this article, shows the closest possible relation between the archaeological and the literary evidence. The stream of invasion which reached the Peloponnese at Rhium must have come from Dodona, and through western Acarnania by way of Thermon across the plain of Stratus to Naupactus, sending a branch westwards to the island of Leukas. Once in the Peloponnese it passed through Elis to Olympia. From here it may have reached Sparta either by way of the Alpheius valley or further south by way of the river Cyparisseis and the plain of Stenyclarus. The occurrence of the place-name Dorion in the Cyparisseis valley is significant. Both these two routes may have been followed, and it is impossible to say which conveyed the greater number of invaders. The route taken by Telemachus³ on his visit to Sparta was probably one of these two, but since neither Pylos nor Pherae, the only two places mentioned in the *Odyssey* as on this route, can be definitely identified, the question remains open. Dr. Leaf⁴ assumes a duplication of sites in the case both of Pylos and of

¹ See *B.S.A.* xiii, p. 73-4.

² The islands have not been dealt with here since my object is only to examine the invasions of the mainland.

³ *Odyssey* iii. 464-497.

⁴ *Homer and History*, p. 366-7.

Pherae, and argues in favour of the Alpheios valley as being the more likely route. Certainly no chariot could reach Sparta from Pherae over Mt. Taygetus.

The second stream of invasion seems, from both the historical and the archaeological evidence, to have been by far the more important. We hear of several invasions by way of the Isthmus, some successful, some not. Pindus, Oeta, Ossa, Olympus, Histiaeotis¹, and Dryopis bulk large in legend; Magnesia alone gives some archaeological evidence, but these regions have been explored but little, and more may appear. Attica, however, gives us ample evidence for one of the halting-places of the invaders in the extensive discoveries of the Dipylon cemetery and in the Acropolis bronzes and pottery. But here, for once, archaeological evidence is flatly contradictory to the evidence of tradition. Attica, we are told, never suffered invasion before the Persians, and Dorians were never established there. The story of Cleomenes on the Acropolis,² who was only admitted to the sanctuary of Athena when he had explained that he was not a Dorian, suggests that Dorians were anathema to the men of Athens. But the story is not explicit. It presupposes only that Dorians were never admitted as equals with the dominant rulers of Athens, who were the indigenous old stock and not invaders: Thucydides tells us as much.³ Ancient tradition does not say that there were no Dorians in Attica, and archaeology clearly shows that there were. The Dipylon evidence suggests a Dorian village outside the walls of the old town, tolerated but not admitted, like the villages of the Pelasgians on Hymettus.⁴ The geometric bronzes of the Acropolis may well have been the offering of these Dorians to Athena. That the Dorian settlements at Sparta cannot be interpreted in the same way is clear from the evidence of tradition which states, as clearly as Thucydides states the opposite in the case of Athens, that the Dorians enslaved the indigenous population as *Εἰλωτες* or *Περίοικοι* and were their masters.

Southwards from Attica this stream of invasion can easily be followed, just as its halting-places at Elatea and Ptous indicated the route followed through Boeotia. It certainly reached Aegina and may have crossed thence to Hermione south of the Isthmus by sea. The fortress at Solygeia⁵ must certainly have been taken from the sea by those of the Dorians who besieged Corinth.

¹ This Histiaeotis below Mt. Ossa (as Herodotus expressly says, i. 56) must not be confused with the Histiaeotis in Euboea.

² Herodotus v. 72.

³ Thucydides i. 2; and see Hogarth *Ionia and the East*, p. 38.

⁴ Herodotus vi. 137.

⁵ See Grote, vol. ii, p. 312.

Indigenous hatred of the invader finds an echo in later history when Cleisthenes of Sicyon gave names to his tribes which ridiculed the names of Dorian tribes.¹ Argos gives ample evidence for another halting-place of this eastern stream of invasion; like Corinth it was invested from a neighbouring fortress,² and once established, the Dorians extended their conquests. Sicyon, Epidaurus, Troezen, Phlius, and Cleonae were, according to tradition, colonized by Dorians from Argos.³ At Mycenae the full force of the destruction wrought by the invaders of the Argolid is seen in the signs of conflagration and ruin. That they subsequently occupied the town is clear from the definite geometric stratum found last year inside the acropolis walls, as well as from the evidence of a purely geometric necropolis found earlier and situated outside the walls on the old Mycenaean road from the Heraeum to Mycenae.⁴ From Mycenae to Argos and Sparta is an easy journey, and the apex of the triangle of invasion is again reached.

Whence the invasion came. So much for the southern limits of the invasion of the Peloponnese. From what direction it came is less clear but obviously of the utmost importance to historians. The discoveries in Macedonia which are the excuse for this revision of the whole question of the invasion may help to provide a clue.

In Thessaly, as has already been suggested by Messrs. Wace and Thompson, geometric influence may have come either from Epirus in the west or from Macedonia in the north. Sir William Ridgeway derives the Dorians from the west coast of the Adriatic, from Epirus and Albania. But the finds at Pateli near Lake Ostrovo, at Chauchitsa, and at Aivasil all indicate that the Vardar valley was used by the makers of the 'spectacle' brooches and other bronze ornaments. The invaders, even if they came from Epirus and Albania, came from farther north still. The 'antenna' sword found at Chauchitsa, as has already been shown, belongs to a type that is most common in Central Europe. The obvious route by which it could have reached Macedonia is the Vardar valley. The 'spectacle' brooches, too, are essentially Central European in type. It should be remembered, however, that the Aivasil burials are very late, probably about the sixth century B.C.,⁵ and that conditions remained unchanged both in Macedonia and in

¹ Herodotus v, 69.

² Pausanias ii, 38. 1.

³ See Grote, vol. ii, p. 312.

⁴ 'Εφ. 'Αρχ. 1912, pp. 127-41.

⁵ Professor Gardner outlines the position thus: 'What seems clear is that Macedonia still remained within the circle of northern influence in the sixth century; it does not seem to have been fully Hellenized until after the time of Alexander.'

Thessaly right down to the beginning of historical Greece. At the same time the geometric culture that we find at Chauchitsa must have been in existence for a long time, perhaps even from early in the Bronze Age. Certainly neolithic remains were found there. Macedonia, then, was itself a halting-place for the invaders, who came from further north still. The Vardar valley in the second millennium B.C., just as in 1914, was the route by which invaders from Central Europe were to reach the Eastern Mediterranean.

The Pateli site was not on any route running directly to the north. On the other hand it *was* on a route running east and west. As such it suggests connexion with Zara and other sites on the Dalmatian coast, where 'spectacle' brooches have been found. With Dalmatia the Ostrovo region may thus have formed a western branch of the main Vardar valley invasion. Dodona and the other western sites may have been reached from Dalmatia, and the whole western stream of invasion, which is clearly of less volume than the eastern, would thus have originated in Macedonia. The traces of Dorians in Thessaly thus probably come from the north rather than from the west. A substantial meaning is thus given to the statement of Herodotus that the Dorian race was *πολυπλάνητον κάρτα*, and that when it dwelt in Pindus it was called a Macedonian race (*Μακεδόνων ἔθνος*).¹

With this new light thrown upon the date and direction of origin of the invasion the general historical setting becomes clearer. The origin of Dorian culture must be sought for farther north than Epirus and Thessaly, and even farther north than Macedonia. The Vardar valley leads ultimately to the Hungarian plain and so to Hallstatt. Bronze horses, birds, and 'spectacle' brooches of the types discussed above have been found in large numbers at Hallstatt, as well as an 'antenna' sword² almost identical with the Chauchitsa sword. But Hallstatt is only a central and better explored metropolis in a widely diffused Central European culture, and it would be a mistake to try to fix upon a too precise area as the original home of the Dorians. Hallstatt, moreover, is for the most part later in date than the culture which made the geometric strata at Sparta or Mycenae, and we must look for the earliest form of the culture which is seen in its latest forms at Hallstatt.

Three additional points, already touched upon, need further discussion.

(1) The settlement in the Kerameikos near the Dipylon

¹ i, 56. See also viii, 43.

² Von Sacken, *Das Grabfeld von Hallstatt*, pl. xiii, 9, 9a, 10 (spectacle brooches), pl. xv, 4-7 (horses), pl. xviii, 35, & xxiv, 6, 7, 8 (birds), pl. v. 10 (sword).

Gate must be accepted as Dorian. Andrew Lang¹ attempted to explain it away as Ionian. But the archaeological evidence directly contradicts such a view. It is certainly not Mycenaean in character. Nor can it be Achaean, for as yet we are not clear what distinguishes things Achaean. It has, on the other hand, no elements that are not geometric, so that, if our original premiss is correct, it must belong to Dorian culture. There must, then, have been a Dorian settlement in Attica living at peace with the people of Attica who were themselves of older stock and not subject to the new-comer. No violence is done to historical tradition by such a view.

(2) The second point is rather artistic than historical. How far can we attribute artistic capacity to the Dorians? The answer has already been given by G. Dickins,² and for the most part in the negative. Nomadic peoples from their nature are not much given to artistic production, though the germ of art may be latent in them. The artistic value of geometric bronzes and of the bulk of geometric pottery is almost negligible. Technique and form, dexterousness and method, and a certain feeling for rhythm and repetition are there, but not art, in the sense that the first aim of the craftsman was to produce the beautiful which was not merely the beautiful *to him*. But this very restraint of art led in the fuller development of Hellenic artistic capacity to that very element of regularity and symmetry that is the spirit of Doric architecture and literature of the seventh and sixth centuries B.C., of the temple of Apollo at Corinth, or of the poems of Alkman at Sparta.

With the Dorians the latent capacity for art began to evince itself at Sparta only after they had been there for at least two centuries. Alien influences from Asia Minor and Egypt, together with the lingering traditions of Mycenaean art among the indigenous Helots and Perioikoi, served as useful stimulants to the ruder and more forcible Dorian tradition.³ The later Spartan ivories show outside influences in a way that is most striking, and the Sparta of the days of Alkman was a luxurious and artistic city. The sumptuary laws and reforms of the late sixth and early fifth centuries B.C. finally subjugated art to militarism, with the inevitable result that the former was ousted and finally suppressed altogether. This process was, in history, associated with the name of Lycurgus.

A survival of Dorian art in its finest expression is seen in

¹ *The World of Homer*, p. 146.

² *Burlington Magazine*, xiv, 66.

³ See Hogarth, *Ionian and the East*, p. 39 and *passim*.

a temple of the sixth century B.C. at Prinias¹ in Crete, where a culture, probably a Dorian colony largely uncontaminated by alien influences, produced sculptures which are, in essentials, purely Dorian. The seated figure of Artemis recalls at once the ivory statuette from the Dipylon at Athens as well as many of the best Spartan ivories. The armed horsemen of the Prinias frieze find almost an exact parallel in other Spartan ivories,² and the horses themselves recall the bronze horses of geometric art. The fact that the temple was dedicated to an Artemis of the Orthia type³ provides yet another link with Sparta.

(3) Thirdly, it has been clearly shown from the recent excavations at Mycenae that the Dorians were the destroyers of the Mycenaean culture of the mainland, at any rate in the Argolid. The same destruction probably took place at Sparta as well, though the traces are not so clear. The invasion was not entirely an infiltration, at least in its later stages. Early thrusts such as the unsuccessful attempt on the Isthmus served to warn the mainlanders of their danger. As a result they set about defending themselves. The rulers of Mycenae, unlike Cypselus of Arcadia, took practical measures of defence. The great walls of Mycenae were built between 1200 and 1400 B.C. during the third Late Minoan period.⁴ At other sites traces of the destruction have not been recorded, but this does not argue that the destruction never took place.

The object of this paper has been to review the evidence for the Dorian invasion in the light of the most recent archaeological discoveries. Historical theories based on *a priori* historical assumptions lead to confusion. Archaeology without historical tradition and criticism is useless and leads nowhere. Much that is well known has been dealt with in this paper, but it has only been used to argue from the more known to the less known and so to interpret the new evidence which I have published.

DISCUSSION

Professor ERNEST GARDNER thought the theory that the Dorians brought geometric pottery into Greece was full of difficulties: for instance, as Mr. Casson had pointed out, the most vigorous development of the style was in non-Dorian Attica. The Macedonian discoveries were a new factor but did not exhibit much geometric work. In the first two years of the Allied occupation little was found ;

¹ *Annuario della Scuola archeologica a Atene*, 1914.

² *B.S.A.* xii. p. 78, fig. 17 a.

³ See the pithos fragment published by Pernier in *Annuario*.

⁴ *Times Literary Supplement*, 19th August 1920.

credit for the chief find was principally due to Major Anderson, who had accompanied him to the site and made a proper record possible. The date was given by a Greek vase which belonged to the sixth or, at latest, seventh century, which meant a local survival of the geometric style, the Dorian invasion having taken place five centuries before. He agreed with Messrs. Wace and Thompson that there was no contact between the North and the Aegean till Late Minoan III, when intrusive objects reached Thessaly; and there were Mycenaean relics in the upper part of the great mound above Salonika, where 20-30 ft. from the surface lay Macedonian wares that suggested contact with the Danubian region. The Dipylon geometric fabric of Attica was not only highly developed but widely distributed in Attica, and even on the Acropolis there was no other ware in the post-Mycenaean period. There was a good deal of variety in geometric pottery, and one kind existed in the Islands long before it was superseded by Minoan products. In Thera, for example, the old civilization might have reasserted itself. In any case Dorians in Attica would be a paradox.

Mr. R. C. BOSANQUET recalled the prophecy that nothing would be found at Sparta, but the British School at Athens had been fully justified by the results of excavation there, and a final account of them was awaited from Professor R. M. Dawkins. He agreed that the early geometric ware at Sparta marked the first occupation of the sites that became important later; and to the two temples mentioned might be added that of Apollo at Amyclae, where the earliest geometric ware was associated with late Minoan pottery, dating from the end of the Bronze Age. During the war he had visited the Monastir plain and had come across fragments of two vases closely resembling the Early Iron Age geometric ware of Thessaly. Albania was thus included in the sphere of influence, and the Dorian invasion had much in common with the infiltration of Albanians in later history. Mr. Hawes had shown that there were brachycephalic people in eastern Peloponnese and Albania and had found the same type of skull surviving in Crete.¹ The northern mountains always produced a surplus population that was compelled to emigrate in order to secure land or employment. Possibly the process began before the Dorian invasion, and it was clear that a large area was covered by the Danubian culture, which would have included ancient Albania in its territory. He was inclined to believe that the main source of the Dorians would prove to be the mountains of Albania.

Dr. H. R. HALL said that for the past thirty years every one had more or less accepted the connexion of geometric pottery with the Dorians; but he was inclined to agree with Mr. Casson that the Dipylon ware was Dorian in spite of the difficulty that nothing was known traditionally of Dorians in Attica. The very animosity of the Athenians seemed to imply that Dorians had once occupied Attica in force, an incident that local historians were bent on obliterating.

¹ *B.S.A.*, xvi, 258 ff.

It was quite natural for the Dorians to come south through Attica and to stay there till ejected by the Ionian inhabitants. The main line of their advance in two streams had also been generally accepted for many years past; and Mr. Hawes's examination of Cretan skulls showed, as Mr. Bosanquet had pointed out, a considerable craniological resemblance between Illyrians, Albanians, and Dorians. Mr. Casson's results from Macedonia certainly showed that the people (*ex hypothesi* Dorians) who made geometric pottery and the little figures of horses and birds in Sparta were the same as those who furnished the Macedonian graves with very similar objects, and possessed the 'antenna' sword; which justified the view that Dorians came down the Vardar valley from the Danubian region of the Hallstatt culture. Sir William Ridgeway twenty years ago postulated a connexion between early Greek post-Minoan culture and Hallstatt, but made the Achaeans, not the Dorians, the bearers of that culture into Greece. Mr. Casson merely desired to transfer the argument from the Achaeans to the Dorians; and there seemed to be no room in his theory for the Achaeans, who were, however, historical and must be found a place in the final scheme. The existence of many such difficulties only added to the interest of the inquiry.

Mr. M. S. THOMPSON stated that the site of the temple of Artemis Orthia had yielded twenty or thirty times more than any other site in Sparta; and above the bed-rock geometric pottery was found at once, to the exclusion of anything earlier. There was also a quantity of decayed amber, which proved a connexion with the North, whereas the ivory carvings found with geometric ware showed that the south coast had already been reached by the Dorian invaders; which, according to tradition, they achieved in a few generations after occupying Sparta. There they came into touch with the Mycenaean trade-routes, which accounted for the ivory. The Dorian colonies of the Mediterranean were really old Mycenaean settlements taken over by the Dorians. In northern Greece the situation was much more difficult, and at present probably insoluble. Geometric ware resembling that from Sparta had certainly been found in the north. On the other hand the ware found at Theotokou might be decadent Mycenaean. A large quantity of geometric pottery, associated with stone implements but of the Bronze Age, had been found in the Spercheus valley, and in view of its very early date, the district might just conceivably be the original Doris. In south Thessaly cremation burials had been found with iron swords and vase-fragments in the geometric style; and in Macedonia pottery with rude spirals or horns painted at the base of the handles, a motive common in the Bronze Age pottery of the Spercheus valley, was very widely distributed. As for the difficulty of a Dorian settlement in Attica, Athens had the reputation of being a refuge for the destitute: why not also for the Dorians?

Professor MYRES in replying mentioned that Sir Arthur Evans and Professor R. M. Dawkins had regretted their inability to attend the meeting. The Halos vases were specially interesting as supplying an approximate date: the brooches were contemporary but represented

two distinct traditions, the large catch being specially characteristic of Dipylon style. Earlier than the 'antenna' sword were others from Halos, generally described as Type II, and dating from the transition from bronze to iron. Portable objects and geometric pottery should be treated separately, as earthenware could not be transported like bronzes. The geometric pottery of Sparta had rectilinear patterns; that of Theotokou and Halos had some motives that were not rectilinear: clearly there were two elements to deal with, and a third tradition survived in the bowls with two high handles, which had analogies in the north-west of Asia Minor. A local art had been modified by the introduction of rectilinear motives, and the native potters had met the wishes of their new patrons, who were conquering intruders. The bronze horses and birds were on quite another footing, as they were portable, and might be used to suggest lines of communication or even of ethnic movements.

The PRESIDENT (Sir Hercules Read) said that Greek pre-history was a special study, but many of those specially concerned were present at the meeting, and the discussion had been a valuable one. The Hallstatt question had a bearing on British as well as Hellenic archaeology; but research was more hopeful where literary evidence could be adduced in addition to discoveries in the field. The latter, however, seemed to him far more trustworthy than the written word, which was always subject to the writer's personality. Professor Myres, who in Mr. Casson's absence had kindly read the paper, which presented a most attractive case, had done it ample justice.

Notes on some English Alabaster Carvings

By W. L. HILDBURGH, F.S.A.

[Read 17th February 1921]

MOST of the carvings herein to be described came into their late owners' hands from private collections, and—as unfortunately is generally the case in similar circumstances—in almost every instance unaccompanied by records of their earlier histories. All but three of them—the Crucifixion, the Ascension, and the one with two saints—came lately from Paris.

Four of them—the Carrying of the Cross, the Deposition from the Cross, the Entombment (pl. VIII), and the Resurrection—were obtained together, and seem, if one may judge by the close agreement in style between three of them and by the similar way in which all four have been weathered, once to have formed part of a Passion set—like the one, for example, in the reredos in the Naples Museum, which further includes a Betrayal, Christ before Pilate, and a tall central Crucifixion.¹

The Carrying of the Cross is of a medieval type, not entirely justified by the Scriptural records, in which an executioner leads Jesus, who wears only the loin-cloth,² by means of a rope round His waist, whilst His mother relieves Him of a part of the weight³ and executioners are pressing upon the cross in order to make it more burdensome.⁴ In one corner is St. John with his palm. One of the executioners has what seems to be a monstrous animal (? a sign of the evil within him) either as a crest, or upon or issuing from his cap.⁵ Size, 15 $\frac{3}{4}$ in. by 9 $\frac{1}{2}$ in.

¹ *Catalogue*, Alabaster Exhibition, pl. i.

² Cf. Mrs. Jameson, *Hist. of our Lord*, 1865, vol. ii, pp. 100 *seqq.* On the table at Compiègne referred to in *footnote 4* just below, Christ is similarly shown; on the fragment of a table given (no. 14) in the *Catalogue*, Alabaster Exhibition, He is shown wearing His robe in accordance with the accounts of SS. Matthew and Mark.

³ Cf. Jameson, *op. cit.*, vol. ii, p. 111.

⁴ Cf. P. Biver, *Arch. Jour.*, vol. lxvii (1910), pp. 81 *seq.*; also, *Cat.*, Alab. Exhib., no. 14.

⁵ Compare the dragon within the crown of Maximian, in the Society's Martyrdom of St. Katharine, *Cat. Alab. Exhib.*, no. 63; the monster's head similarly placed on the table of the same subject formerly belonging to the Architectural Association and now in the Victoria and Albert Museum (*ibid.*, no. 43, and *Arch. Jour.*, lxvii,

The Deposition, which is to some extent of a conventionalized type,¹ shows Joseph of Arimathea supporting the body by means of a cloth, while St. John² on a ladder assists in the lowering, and Nicodemus, seemingly with one knee almost touching the ground, withdraws the nail from the feet; at one side, the anguished mother clasps her hands together. Nicodemus appears curiously dwarfed; as I have been unable to find any reference to a medieval conventional representation of him as a dwarf, I am inclined to think that perhaps his misshapeness here has been due in part to the exigencies of space which have brought Christ's feet near the ground, though more probably mainly due to the carver's having followed, without comprehension (and probably not at first hand), the lines of a figure of Nicodemus kneeling while he withdraws the nail. Figures reduced in size, but approximately properly proportioned, are often to be found on the tables--the man on the ladder here is an example, while others bearing immediately upon the present question are those of Nicodemus in the Deposition of the Passion sets at Naples and in Iceland³—but in their cases the reduced scales seem generally to be the result of attempts to fit the figures into particular situations. The deep sense of reverence observable in the attitudes of the persons of the group (as shown clearly, for example, in Joseph's use of a cloth to support the unclothed part of the body), seems to give reasonable ground for the conjecture that the intention has been to show Nicodemus almost kneeling; and the position of his rearward foot lends support to that conjecture. Medieval representations of the Deposition in which Nicodemus stoops with bended knees while he withdraws the nail from the feet occur by no means infrequently, and in some

opp. p. 90); and the 'demon' within Diocletian's crown, in a Martyrdom of St. Erasmus (*Cat.*, no. 23). A supernatural monster appears, on the turban of the evil Dacianus, in a table of the St. George series at La Celle (cf. Biver, *op. cit.*, pl. x and p. 74). The convention, as indicative of great wickedness, was perhaps derived from the mystery-plays.

¹ Compare Jameson, *op. cit.*, vol. ii, p. 218.

² It is probably not mere chance that has caused the Virgin to be placed at the right of the body and St. John at the left, for that is precisely the disposition given them in the usual conventionalized representations of the Crucifixion. On the symbolism connected with this, see E. Mâle, *Religious Art in France of the 13th Century*, 1913, pp. 190 *seqq.*

³ One of the midwives, in representations of the Nativity, is commonly shown on a reduced scale (cf. *Proc. Soc. Ant.*, xxxii, 129); and other examples of reduced figures appear in a Martyrdom of St. Erasmus (*Cat. Alab. Exhib.*, no. 52), in the Christ bearing the Cross of the reredos at Saint-Avit-les-Guespières (Biver, *op. cit.*, pl. v), and—even apart from those in which angels or donors appear—on many other alabaster panels.

of these he has the position (occasionally with the legs reversed) in which the carver seems here to have tried to show him¹; I think we may therefore reasonably suppose that this uncomfortable attitude was consciously selected by medieval sculptors.² Whence have been derived the attitudes and the grouping of the personages of the present panel I do not know. I am inclined to think, however, that they follow some English type of Deposition, for what seems to be the closest parallel I have found to them occurs on an ivory plaque³, in the Victoria and Albert Museum (3—1872) which has been credited to an English source and is supposed to have been made about the year 1000. A somewhat similar arrangement occurs on a diptych,⁴ dated about 1350, in the same museum (367—1871), formerly thought to be possibly of English origin, but now attributed to France. On the former ivory the general resemblance is very marked; in the latter it is less so, because of the absence of Mary and of John's ladder. On both the ivories, however, we find Nicodemus shown on a reduced scale, although there was sufficient space for him to be shown larger. Another ivory panel, supposed to be English work of the fourteenth century, in the British Museum⁵, shows Nicodemus kneeling to withdraw the nail, but has Mary holding Christ's hand, and John merely standing on the opposite side of the cross, according to the grouping followed in various French ivories of the fourteenth century. On the back of the alabaster VI has been scratched, perhaps as an indication of the panel's position in its set; this suggests that the panel was the first one of the second part of a 9-table set which contained an Ascension in addition to the Entombment and the Resurrection hereinunder described. Size, 17 in. by 11½ in.

The Entombment is of a not uncommon type of this often-shown subject, and—apart from the peculiar beauty and charm of some of its figures—its only unusual feature seems to be that Mary Magdalen is seated near the feet of the body of Christ and facing Him, instead of (as is almost invariably the case

¹ For various illustrations of this, see Gabriel Millet, *Recherches sur l'Iconographie de l'Évangile*, Paris, 1916, chap. ix ('La Descente de Croix'), and cf. especially remarks on pp. 469, 472, 473. Cf., also, O. M. Dalton, *Cat. Ivory Carvings...* *British Museum*, 1909, nos. 282 and 268; and W. Vöge, *Königliche Museen zu Berlin, Die Elfenbeinbildwerke*, 1902, pl. 29.

² There seems a possibility that in some cases at least it has been due to a misconception on the part of a carver copying a kneeling figure shown—as was not infrequently the case—in a sort of perspective on a relief.

³ Cf. Prior and Gardner, *Medieval Figure-Sculpture in England*, 1912, fig. 117.

⁴ *Ibid.*, fig. 52.

⁵ Dalton, *op. cit.*, no. 243.

on alabaster tables) at His head and facing towards the spectator's right. The close similarity observable between the grouping and the attitudes here and those in the Entombment of St. Etheldreda I exhibited some years ago,¹ suggests that the design of the typical Entombment of a Passion set was made to serve as groundwork when at least the example here cited of the far less frequently ordered St. Etheldreda panel was ordered.

The Resurrection shows a standardized grouping, and has no peculiar characteristics. On the back of the panel are two long parallel scratches, and a large X formed of two scratches, all of which are probably accidental and without significance.² Size, $15\frac{7}{8}$ in. by 9 in.

The Christ before Pilate (pl. VIII), which lacks its lower part, came from the same collection as the St. Christopher shown in pl. IX, 3. Other examples of this subject, not a very common one on tables of the Passion series, occur at Compiègne (Biver, *op. cit.*, pl. xvii and p. 81), in the Naples reredos (*Cat.*, Alab. Exhib., pl. i), and in the Toulouse Museum.³ The present example, which differs both in grouping and in treatment from those at Naples and at Compiègne, shows Pilate's bowl supported by some kind of stand,⁴ the leg of which is now missing, instead of held by an attendant as is more commonly the case in representations of this scene in art. Width $11\frac{3}{4}$ in.

A Crucifixion table, until recently in a private collection in Spain, which (as is clearly indicated by the relation between its height and its width) served as the central panel of a Passion series, shows the scene according to the conventions commonly followed on alabaster tables, and has, I think, no unusual features. Height $20\frac{1}{4}$ in., width $10\frac{1}{2}$ in.

The alabaster table of the Ascension (fig. 1), exhibited by the Rev. W. G. Clark-Maxwell, F.S.A., was found in January 1921 in a lumber room at Corrughan, Dumfries, in a house where it had been preserved since at least 1861. It is particularly interesting from an iconographical standpoint. Christ, un-nimbed, wearing a loin-cloth and a loose robe, holding in His left hand a cross-staff with banner, and with His feet upon what seems to represent a cloud, stands within a mandorla. His right hand,

¹ *Proc. Soc. Ant.*, xxix, p. 90.

² For a note on the marks to be found on the backs of some alabaster carvings, see E. Maclagan, *Burlington Magazine*, vol. xxxvi, pp. 64 *seq.*

³ A. Bouillet, *Bull. monumental*, 1901, p. 62.

⁴ A support of a similar kind is to be seen in some Early Christian representations of the scene; cf. Rohault de Fleury, *L'Évangile*, 1874, vol. ii, pl. lxxxiii and pp. 238 *seq.*

now missing, was probably raised in benediction. To His right looking towards Him, are the Virgin Mary and St. James (as a palmer), (?) St. Peter, and two other Apostles, while a part of the body of another shows at the side of the mandorla. To His left are St. John Evangelist, St. Andrew, and four other Apostles, the uppermost of whom is beardless (he is, excepting St. John,



FIG. 1. Alabaster table of the Ascension.

the only beardless one) and has long curls. The five figures (James, Mary, John, Andrew, and another) in the front row, and presumably the others also, are kneeling. There is a deep channel between John and Andrew's support, another between Andrew and the next Apostle, and a third between Mary and James. While Ascension tables are by no means rare, the Saviour is generally represented upon them only by His feet and the lower part of His garment, below a cloud¹; the present

¹ *Cat.*, Alab. Exhib. nos. 3 and 8, and pl. iv; Prior and Gardner, *op. cit.*, fig. 551; Biver, *op. cit.*, p. 86; MacLagan, *op. cit.*, pl. i. Cf. E. T. Dewald, 'Iconography of the Ascension', *Amer. Jour. Archaeol.*, 1915, pp. 315 seqq.

representation of Him is very unusual on alabaster tables, and I recall only one similar table which has hitherto been figured.¹ Mandorlas occur fairly commonly in representations of the Ascension in other media,² but for some reason—possibly merely because the convention was one generally accepted during the thirteenth, fourteenth, and fifteenth centuries³—the conventional symbolism of the cloud and the feet was preferred by most of the English alabastermen. While the mandorla is rare upon alabaster Ascensions, it is to be seen in a Conception group⁴ (*Cat.*, no. 57), and not infrequently surrounding the Child on Nativity tables (cf. *Proc. Soc. Ant.*, xxix, pp. 86, 83).⁵ There are no marks on the back of this table. The top of the table is missing; its present height is 17 in., width 12 in.

The panel shown in fig. 2 has obviously belonged to a set dealing with the life of some saintly ecclesiastic, probably Becket, or, possibly, William of York, both of whom appear not infrequently upon alabaster tables. It represents the consecration of an archbishop, who is seated upon a throne, with his hand raised in benediction while a bishop hands him his cross-staff and another bishop puts the mitre on his head; in the background two acolytes each hold a bishop's crozier and a book. The ground is thickly sown with the characteristic flowers formed of painted dots. The background is gilt, with blank spaces where there were formerly the characteristic small bosses. The original lower part of the panel has been removed almost up to the battlementing. Upon the back is a mark, seemingly as shown in fig. 3 a, somewhat difficult to decipher as it has been complicated by what appear to be irrelevant accidental scratches. Present height 13 $\frac{5}{8}$ in., width 9 in.

In fig. 4 is shown a table of somewhat uncommon type, carrying two standing saints, the brothers James and John. The former is recognizable not only by his pilgrim's garb, but also by the scroll which he holds and upon which can still be traced the first words of that article of the Apostles' Creed which was supposed to have been composed by him: 'Qui conceptus est de Spiritu sancto, natus ex Maria virgine.' St. John, upon whose breast IA has been lightly scratched, holds a golden cup from which issues a fearsome green winged serpent, and a scroll

¹ In the reredos in the church of Saint-Michel, at Bordeaux; cf. Biver, *op. cit.*, p. 85 and pl. xviii.

² Dewald, *op. cit.*, *passim*.

³ *Ibid.*, p. 351.

⁴ Now on loan at the V. and A. Museum.

⁵ It is, of course, a regular accompaniment of the Virgin Mary on 'Assumption' tables.

bearing the article ascribed to him—'Passus sub Pontio Pilato, crucifixus, mortuus et sepultus est'—of which only the beginning is still legible. The table, which retains much of its original colouring, was formerly in a convent near Liège. Size 16 in. by 11 in.

The four images on pl. IX, all representing St. Christopher,



FIG. 2. Consecration of an Archbishop.

have, as is indicated by their flat backs, been intended for placing against a wall or other flat surface, and their form, rectangular as to its lower part only, suggests that they were prepared for use as isolated figures rather than as portions of reredoses.¹ Alabaster figures of St. Christopher, although now comparatively rare,²

¹ Cf., however, note on last figure of St. Christopher.

² There is a statue of St. Christopher at one end of the reredos at La Celle (Eure) (cf. Biver, *op. cit.*, p. 77 and pl. viii), and an image-panel of him in a Virgin set at Châteaulaudren (cf. *Cat.*, Alab. Exhib., p. 47). Of the present four images, three came recently from Paris, without prior history attached; the smallest was acquired in England.

were, we may reasonably suppose, probably once very common in England, because some sort of representation of St. Christopher was formerly to be found in almost every English church.¹ The close resemblance in attitude, etc., among the four images is striking, and seems to show that the type followed had become standardized in England by the time these images were made. That large flat-backed images were made by the alabastermen, seemingly in preference to images in the round, may possibly have been due to the skill and practice they acquired through their continued manufacture of the scenic tables; or, possibly, because images of the panel-type were more easily and safely transportable than alabaster images in the round.

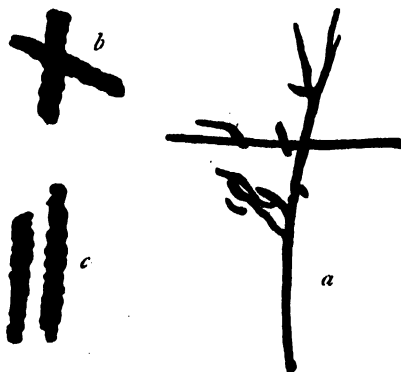


FIG. 3. Marks on alabaster tables.

The finest of the four is that (pl. IX, 1) recently presented to the Victoria and Albert Museum, by a committee of his friends, as a memorial to the late Cecil Duncan Jones, which is remarkable not only for its unusual beauty but also for its exceptional size.² The giant is wading, as in the other images here shown, bearing the Child seated upon his left arm and shoulder, and supporting himself by means of a great staff which he here holds in both hands. As in those other images, the Child is cloaked, and He raises one hand (here wrongly restored; it should be blessing) whilst in the other He holds a globe. Foliage, consisting here of a group of naturalistic leaves, is at the upper end of the staff in

¹ Cf. Mrs. Collier's 'St. Christopher . . . in English Churches', *Arch. Jour.*, 1904, p. 137.

² Two other exceptionally large alabaster figures, at the Cluny Museum, may here be recorded: an Assumption of the B.V.M., which is considerably larger than the present figure; and a St. Ursula, which is (I think) a little larger.

accordance with the legend which tells how Christopher discovered, on planting his staff in the sand when he had reached the land, that it had borne leaves and flowers. At the base of the image is a priestly donor, with a scroll (now blank) running upwards. The top of the saint's cap is missing, and the hands and one¹ foot of the Child have been restored. The image still retains much of its original colouring. Height $37\frac{3}{4}$ in., width $12\frac{1}{2}$ in.



FIG. 4. Alabaster table of SS. James and John.

In the second image (pl. IX, 2) St. Christopher, who wears a flattish cap, has his feet projecting in a curious way beyond the water (here represented conventionally in a manner¹ also to be observed on the two images next to be described; observe also the angles indicating the positions of the submerged parts of the legs), seemingly in order to suggest the translucency of the water,

¹ To be seen also on a table showing St. Armel (*Cat.*, Alab. Exhib., no. 66), whose general treatment suggests that it and the present image came from the same workshop.

and his staff bears foliage oddly shown as a number of polyhedral knobs. This peculiar treatment of foliage has been noted by Prior and Gardner (*op. cit.*, p. 491), who refer to several examples of it. Such examples are by no means rare, for several were already known to me when Dr. Philip Nelson kindly brought to my attention a number of others he had recorded. In the smaller South Kensington St. Christopher (pl. IX, 4) something of the same polyhedral treatment may be seen, but less clearly marked. The Child's orb has a hole which shows that formerly it was surmounted by a cross—probably a metal one. On the back of the image IIIV has been scratched.¹ Size, $25\frac{1}{4}$ in. by 10 in.

The third St. Christopher (pl. IX, 3), who wears a sort of Phrygian cap, has unfortunately lost the top of his staff, so that the treatment of its foliage is not available for comparison. On the back of the image are several marks (fig. 3, b and c), including an X, about 1 in. high, deeply graven with small broad cuts, a pair of parallel lines about $1\frac{1}{2}$ in. long, cut in the same way, and three parallel lines (III) which seem to correspond in intention to the IIIV on the previous figure. Size, 18 in. by 6 in.

The smallest image, which belongs to the Victoria and Albert Museum, and in which the Child is nimbed, has been ornamented by means of light lines of gold paint, in a manner similar to that common amongst the small continental alabaster panels of the late sixteenth century. As it forms a pair with a female saint thought to represent St. Etheldreda, and as its dimensions are suitable, the possibility that it formed one of the terminal figures of a reredos has been suggested.² Size, $16\frac{1}{2}$ in. by $5\frac{1}{2}$ in.

¹ This suggests that, despite its seemingly unsuitable form, the image has formed part of a reredos; cf. Deposition table, *supra*, and various other tables similarly bearing numerals.

² Cf. footnote 2, p. 228, *supra*.

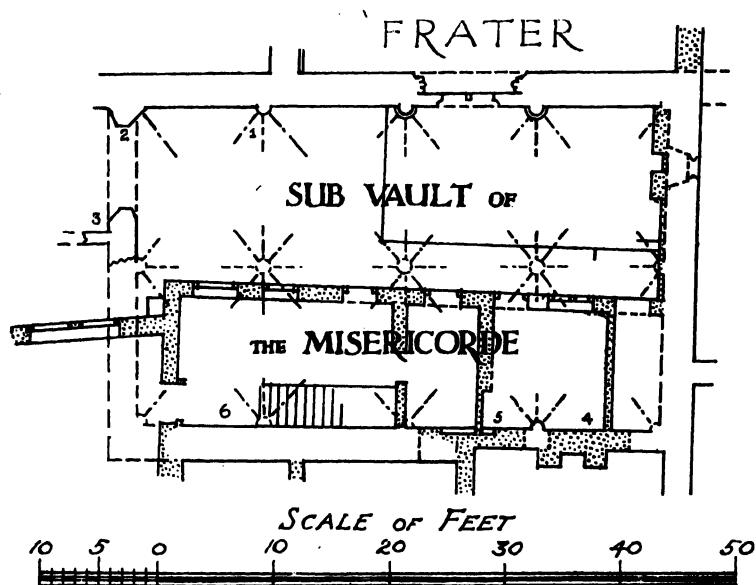
Notes on some Recent Excavations at Westminster Abbey

By REV. H. F. WESTLAKE, F.S.A.

UNTIL the publication in 1911 of *The Abbot's House at Westminster* by Dr. Armitage Robinson, it had been assumed by all previous investigators of the monastic buildings at Westminster that the Misericorde stood upon the site of what is now Ashburnham House. From documentary evidence Dr. Robinson was led to the conclusions that this site was actually that of the Prior's House, and that the Misericorde lay either in an angle south-west of the Frater and contiguous with it, or in a loft at its west end as at Durham. He inclined strongly, however, to the former hypothesis, influenced by the remains of two vaulting-shafts on either side and south of a hatch communicating with the Frater. One further conclusion was that the Misericorde was upstairs. 'If there was a vaulted chamber under the Misericorde which formed part of a passage to the kitchen, all the facts fit in well together.' It may be remarked that further documentary evidence has served only to confirm Dr. Robinson's view, but until recently no attempt has been made at any serious investigation of the site, though the late Clerk of the Works, Mr. Thomas Wright, sen., left some valuable notes of observations made by him on the occasion of the laying of a drain.

The site lies at the back of No. 20, Dean's Yard, and more than three-quarters of it is covered by buildings. The vaulting-shafts on either side of the hatch are beneath the floor of an out-house and their bases lie 4 ft. 8 in. from the floor-level, the distance from centre to centre being 11 ft. 4 in. On removing the earth at the same distance to the west another similar shaft was found (no. 1 in sketch-plan). Further to the west again (2) the splayed stones of what seemed to be a doorway were found, thus fixing the line of the western wall, a portion of which was soon discovered (3) with a piece of a narrower wall at right angles to it. On removing the plaster from the wall of a coal-house (4 and 5) two filled-in low arches were found, and beneath the pavement between them the top of another vaulting-shaft, thus determining the width of the building as 27 ft. 4 in. The central line running

from east to west could not be investigated as a large drain exactly occupies it. The thick wall further west (5) was already known, though its connexion with any building north of it had not hitherto been suspected. The result of the whole investigation shows that the original building consisted of four double bays forming an undercroft just over 45 ft. in length and only about 9 ft. high, which is probably to be dated very early in the thirteenth century. In the southern wall (4 and 5) about 5 ft. from



the ground are two corbels, unsymmetrically placed as regards the arches, which evidently supported a hearthstone in the Misericorde above, a reference to which occurs in the Almoner's Roll for the year 1361-2. Documentary evidence shows clearly that this undercroft was not the kitchen itself and that the latter is to be sought to the south of it, the communication with it being doubtless through the now filled arches in the southern wall.

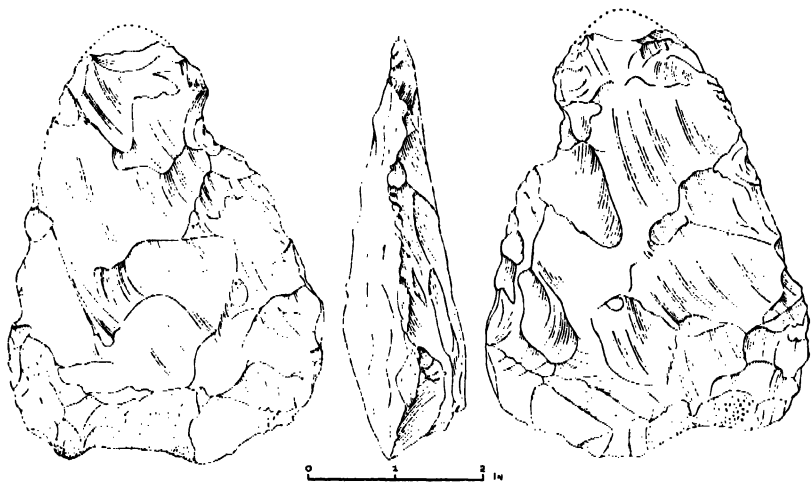
Thanks are due to the Dean and Chapter of Westminster for providing facilities for the excavation, to Canon Vernon Storr for allowing his premises to be treated somewhat roughly, and to the Clerk of the Works, Mr. Wright, for his cordial co-operation and advice throughout the course of the work.

Notes.

A Gloucester Palaeolith.—Mr. Miles C. Burkitt, M.A., forwards the following account of a palaeolithic implement from Gloucestershire, which, as far as is known, is the first implement of this type that has been found in this region of England.

The implement was found some little time ago by Mrs. Clifford of Upton Lane, Barnwood, Gloucester. It occurred some $2\frac{1}{2}$ ft. from the surface of a gravel pit close to her house, and along with it were found the teeth and tusks of mammoth (*Elephas primigenius*), as well as remains of *Rhinoceros tichorhinus*.

The implement is roughly equilateral in shape ($4\frac{1}{2}$ in. by 4 in. extreme width) and thin for its size. The two faces are flat, not



A Gloucester palaeolith.

convex, and have been made by removing large feather-edge flakes. A little of the crust is still to be found at the butt. The point is unfortunately missing. The sides are straight, not crenellated, and in one of them, near the point, there is a notch, the splayed edge of which is uppermost when the notch is to the right. This is unusual, this feature generally occurring when the notch is to the left. The patina is golden brown and lustrous. The implement cannot be Chellean, as the associated fauna is cold. It might be either of late Acheulian or early Mousterian age—probably the former. It would be very interesting, therefore, for some local geologist to study these Barnwood gravels in detail, with an eye to the tracing out of terraces. The region was never glaciated, and with one of the gravels dated, much further interesting data might be collected.

About half a mile away in gravel on the opposite side of the main road, a 'point' of Le Moustier type has also been found nearly 5 ft. from the surface, the material being flint with a bluish patina, and the only associated bones being those of the mammoth.

Discovery of flint implements at Darlington.—A find of flint arrow-heads and implements has recently been made in an allotment in Cleveland Avenue, Darlington. This is the second discovery in the neighbourhood within the last few years, as a similar find is recorded as having been made in March 1918 about 100 yards away.

A Stone-axe factory in Wales.—On 19th April Mr. S. Hazzledine Warren presented to the Royal Anthropological Institute a report on the excavations at Graig-Lwyd on the slopes of Penmaenmawr, carried out last June under the auspices of the Institute. The neolithic craftsmen made their stone axes either directly from the natural blocks of scree, or indirectly by first striking off large flakes. These large primary flakes often weigh from 7 to 14 pounds, or even more, and their production in such a tough and intractable material is evidence of remarkable skill. Core and flake-implements were made indifferently, according to convenience in working the stone. Some might be mistaken for Late Chelles and St. Acheul implements, others in the preliminary stage resemble the earlier Chelles group. Flakes with faceted platforms, recalling the Levallois technique, were produced in large quantities as a waste product. Over 400 'ends of celts' (as they are usually called) were found, and 32 complete axes have been re-fitted from these halves broken during manufacture. The industry is thought to resemble that of Grime's Graves and Cissbury. Four broken polished axes were recovered from the main 'floor', and three of these had been re-chipped after breakage into make-shift blades. One stone plaque is engraved with a series of triangles. A paper on the subject was published in the Institute's *Journal*, vol. xlix (1919).

Early palaeoliths at Cromer.—At a meeting of the Royal Anthropological Institute on 3rd May, Mr. Reid Moir exhibited a large series of ochreous flint implements, cores, and flakes recovered upon a limited area of foreshore at Cromer, Norfolk. These specimens are remarkable not only for their brilliant colouration, but for their unusual size, suggesting a hand much larger than at present. Several examples referred to the Early Chelles period were associated with rostro-carinates, choppers, scrapers, points, partly-finished specimens, cores, and flakes; and it is evident that this was a factory-site in the lowest stratum of the Cromer Forest Bed, and therefore of Upper Pliocene age. In connexion with these large flints, it is of interest to note that the massive human fossil jawbone found at Heidelberg in Germany was supposed to be of about the same antiquity as the Cromer Forest Bed.

The Grimsdyke.—On 11th April Mr. G. E. Cruickshank, F.S.A., conducted an excursion along the Grimsdyke, a prehistoric rampart and ditch that in part coincides with the boundary between Middlesex and Hertfordshire. If Pinner is not the western extremity, there is at least a gap at Cuckoo Hill, and ten years' search has revealed many long stretches that prove the former course of the earthwork eastward through Hatch End, Bentley Priory, Elstree, and Barnet to Potter's Bar. The height of the bank and the depth of the ditch vary con-

siderably, and what is more surprising, the ditch is occasionally on the north side of the rampart. It is, however, clear that this boundary or defensive work was erected with infinite labour by people living on the north side of it, perhaps the Catuvellauni, whose stronghold Verulam was stormed by Caesar; and the object was doubtless to keep out the occupants of the Thames valley or invaders from that direction. Mr. Cruickshank's map when completed will be much appreciated, and may lead to a more thorough survey of similar earthworks on the Chilterns. The name is common enough in Britain; and archaeologists will one day emulate Pitt-Rivers and find a purpose and at least a limiting date for these imposing works.

Discovery at Eastbourne.—The Rev. W. Budgen reports the discovery of fifteen skeletons at Willingdon Hill, Eastbourne. They evidently belong to the same cemetery as those described in *Sussex Archaeological Collections*, vol. lii, by Mr. Strickland. Two small knives found with them are of the type usually placed in graves of the pagan Saxons; but two larger knives with thick backs are small examples of the scramasax type, rarely found in England. The skeletons are said to have lain east and west, with the head at the west end, but this is no proof of Christian burial, and the sixth century is a likely date for the cemetery.

Irish gold in Scotland.—In the *Glasgow Herald* of 30th April is an account by Mr. Ludovic Mann of a discovery in Arran for which he was partly responsible. On the 25 ft. raised beach of the west coast a gold object, generally known by the misleading name of *fibula*, was found under one of several stone slabs in February. Its weight is just over 3 oz. and the type was referred to in the *Journal* of January 1921 as possibly representing the oath-ring of Northern Europe; and a similar specimen from Islay is referable to the same source, for the type is abundantly represented in Ireland and is rare elsewhere. The other gold object was found by Mr. Mann a few inches away from the first and weighs about $\frac{1}{4}$ oz. It is of penannular form, the faces being truncated cones set base to base, like that from Heathery Burn Cave, co. Durham (*Archaeologia*, liv, 95, fig. 2); and the date of both is thus approximately fixed at the end of the Bronze Age. Both the Arran specimens have been presented to the Corporation of Glasgow and will be exhibited in the Kelvingrove Museum.

Roman Burials in Gloucestershire.—In a recent lecture to the Society for the Promotion of Roman Studies Mr. St. Clair Baddeley described over fifty interments discovered at Barnwood, near Gloucester, at an average distance of 20 yds. from the Roman road known as Irmin Street. Most of them were interments without coffins, of men, women, and children, lying about east and west, and two or three skeletons in a contracted position were evidently of persons who had met with a violent end. The inhumations were 3–5 ft. below the surface, but there were also seventeen urn burials after cremation, lying at a depth of 6–7 ft., and below all, at about 14 ft., are plentiful remains of extinct animals in gravel, including two species both of the elephant and rhinoceros. Professor Keith has been entrusted with an examina-

tion of the human skeletons; but it is hoped that the prehistoric mammals will also be considered, and human traces looked for in that deposit, as the present number of the *Journal* shows that palaeoliths do occur in the county. The excavation of a Roman cemetery is a rare and welcome event in British archaeology, and Mr. Baddeley's report is awaited with interest.

More Pile-dwellings in Switzerland.—The recent drought has done for the Lake of Morat what partial draining did for the adjacent Lake of Neuchâtel half a century ago. *L'Illustration* of 9th April 1921 gives an account of the recent discoveries and photographs of the piles laid bare on the shore at Greng; and as the shallows at the east end of Neuchâtel, known as the station of La Tène, are only five miles to the north, further light on that period of the Early Iron Age can be confidently expected.

Camps on the South Downs.—Earthworks have a perennial interest, if only on account of their vague chronology; and the increased attention given to them in recent years has still left many of their problems unsolved. Among the best known are those of Sussex, but even the excavations undertaken by Pitt-Rivers at Cissbury and Mount Caburn, near Lewes, added little to our knowledge. Mr. H. S. Toms, of Brighton Museum, who worked under him, has recently revised the evidence; and by considering the Early British relics in relation to their position in the ground and by taking oyster-shells as proof of Roman date, has come to the conclusion that the two camps mentioned, and probably others of the kind, as at Seaford and Folkestone, date after the Roman conquest of A.D. 43. His arguments are given at length in the *Sussex Daily News* of 10th March, 6th April, 4th May, and 11th June, and will no doubt stimulate discussion of a point that might have been settled forty years ago.

Roman remains in London.—Roman timber work has recently been discovered in the course of excavations for building in Miles Lane, north of Thames Street. The work would appear to have formed part of a wharf, within which buildings were erected at a later period in the Roman occupation. It has not yet been possible to make a satisfactory plan, as the remains have only been found in isolated excavations. The pottery so far discovered dates between the years A.D. 80 and 120.

Find of Republican denarius in Surrey.—A silver Republican denarius of the Gens Sergica was recently found in a field near Woodyers Farm, in Wotton parish, Surrey. The obverse bears the helmeted head of Rome and the word ROMA: the reverse a man on horseback and the inscription M. SERG. SILVS below the horse. The coin is one of those struck towards the end of the second century B.C., and appears to be similar to that recorded by Babelon in his *Monnaies de la République romaine*, ii, 442. It does not occur in Professor Haverfield's list in *Archaeologia*, liv, 494.

Roman remains at Seaton, Devon.—Major-General Wright in the course of planting an orchard in his grounds on the slope of the hill to

the north-west of Seaton has discovered the remains of a Roman dwelling. Up to the present he has only been able to uncover part of a mosaic pavement, with the remains of walls on two sides. The pavement is very fragmentary, but one corner exhibits a guilloche border in what appears to be chalk, blue lias and red tile tesserae. The whole of the room has not yet been uncovered, but patches of the same pavement have been found at various points, showing that it covered an area of about 16 ft. square. The tesserae were set in a matrix of cement, but owing to the nature of the soil, the whole, with the exception of the red-brick tesserae, has become very friable, and it is doubtful if it will long withstand the effects of the weather if left open. It is certainly not in good enough condition to stand removal. The walls are of very poor workmanship, apparently in great part composed of undressed stones and clay without any foundation, the bottom course being on a level with the pavement.

In the course of his investigations General Wright has found a number of slate roofing tiles, fragments of earthenware roofing and flue tiles, a few iron nails, and a little pottery. As far as can be judged from the very scanty remains, the room containing the pavement is probably part of a villa, and the presence of flue tiles indicates that a hypocaust must have existed near at hand. Some years ago traces of a Roman villa were found some 200 yards away, and as there is a spring close to the spot where the present find has been made, it is not improbable that a bath building in connexion with the villa previously found was situated at this spot.

Ancient tile-factory at Minety, Wilts.—In the *Wiltshire Archaeological Magazine* xxxviii (1913-14), p. 638, is a note by the editor on the occurrence of a 'great quantity of fragments of Roman tile and brick' in a ploughed field at Oaksey Common, at the foot of Flisteridge Hill. The site was described in the *Wilts and Gloucester Standard*, and copied in the *Wiltshire Gazette*, 21st May 1914. Mr. F. Gibbons, who first drew attention to the site, suggested that it was the site of a kiln.

Mr. O. G. S. Crawford visited the site on 7th March 1921 for the purpose of recording its position on the Ordnance Map (Wilts, sheet 9, north-west). It consists of a large mound in a ploughed field, actually within the parish of Minety. The mound is situated a few yards to the east of the boundary between Crudwell and Minety, between the wood called Oaksey Nursery and the Braden Brook. The mound is thickly covered with broken fragments of tiles, both flat and flanged, and of thin tile-like bricks, some of them of a very hard vitreous nature. Many of the tiles are ornamented with comb-markings, such as occur on Roman box-tiles. Mr. Crawford did not, however, find any fragments of box-tiles on the site, nor a single fragment of pottery.

The fragments extend for a short distance round the mound on every side. About 300 yards to the south-west is another mound, on the south-western margin of a small copse. One or two similar fragments could be seen hereabouts, but not in anything like such profusion as on the larger mound.

From there it has gradually advanced eastwards in the form of dunes, driven by the prevailing westerly winds. The modern beach-sand of Harlyn Bay itself is probably derived from the cliffs above, which are covered with dunes, themselves derived ultimately from Constantine Bay. It is, therefore, not unlikely that the upper levels of the Constantine midden are contemporary with the Harlyn cemetery, while the lower levels may be earlier. It may be conjectured that the earliest settlements were on the shores of Constantine Bay, and that as the dunes steadily advanced eastwards the inhabitants retreated in front of them to Harlyn. It is possible, therefore, that many parts of the isthmus, now covered by dunes sometimes as high as 50 ft., may have been the site of settlements at one time or another. It would be possible to determine this by digging a chain of trial-pits at selected spots right across the isthmus. Such pits would also be of considerable geological interest; and would throw much light on the age, depth, and extent of the raised beach, which might even be found to contain valuable 'human' evidence. Trial-pits dug at the inland midden referred to on p. 294 and at that near Constantine Church, would in themselves be of great interest.

It is very desirable that excavations should be undertaken at Harlyn under the aegis of a scientific body, and that they should be entrusted to a properly qualified excavator.

The natural resources of its immediate surroundings explain the importance of Harlyn Bay in prehistoric times.

Geographically the position has many advantages. It is a sheltered roadstead, protected from the winds and currents of the open sea by Trevoze Head. It is thus a suitable port of call for small ships. Close by is one of the five harbours of North Cornwall, the estuary of the Camel, and Trevoze Head is a fine landmark for ships. That there was direct intercourse between Harlyn and Ireland is proved by the crescents made doubtless from the gold of the Wicklow mountains. Harlyn is, moreover, a very probable termination for an isthmus road across the Cornish peninsula. That such roads existed in the Mediterranean is shown by M. Victor Bérard¹; and it is reasonable to suppose that the same causes which produced them there, would have operated here too. The promontory of Land's End is not one that small vessels would care to round if it could be avoided. As a matter of fact a track which may well be of great antiquity runs from Pentewan Beach along the ridge between the Pentewan stream and the sea, east of St. Austell, over Hensbarrow Downs through Roche, Tregonetha, east of the Nine Maidens, and thence to Treyarnon and Harlyn.

¹ *Les Phéniciens et l'Odyssée.*

Such a road would connect a port for South Wales and Ireland on the north with one for Brittany and Spain on the south. It is rather a remarkable confirmation of this hypothesis that objects of Irish and Spanish type should be found less than half a mile apart at the assumed northern terminus of this transpeninsula trade-route.

These geographical advantages were enhanced by others of a minor character. At Cataclews is an outcrop of a dyke of hard igneous rock—very suitable material for stone axes. A number of axes of igneous rock have been found in Wessex and further east in England; and it is reasonable to suppose that many of them came, if not from Cataclews itself, at any rate from some other place in Cornwall or Devon, the only other probable source being Brittany. Attention has already been called to the resemblance between a stone axe (fig. 10) found somewhere near Trevoze Head and another found in Wiltshire. The barrow in which the latter was found, called 'Jack Straw's Castle', stands immediately upon a very ancient trackway called the 'Hardway', which is almost certainly a continuation of the Hampshire Harroway. This in turn joins the Pilgrim's Way at Farnham. Westwards beyond Jack Straw's Castle, the same old road may be followed on the map across Somerset and into Devon and Cornwall to its terminus at Marazion. It was the link between east and west, and its course is studded thickly with prehistoric finds, especially of the Late Bronze and Iron Ages. Finds of British coins are very numerous along its course. If the Cornish tin was carried by land to an eastern port, that was the route adopted, and along the same road doubtless came in earlier days the stone axe found in Jack Straw's Castle.

Cataclews stone makes, moreover, admirable mortars. One such mortar has actually been found on the farm of Mr. Biddick of Trevoze. It is 14.6 cm. (5.75 in.) high and 14.2 cm. (5.5 in.) wide. The sides are 2.6 cm. (1 in.) thick in the middle and the base 4.6 cm. (1.75 in.) thick. It is cut out of a solid lump of rock, and is in the possession of the Rev. A. D. Taylor of Whitworth, to whom I am indebted for permission to draw and measure it. It was certainly used for pounding some hard material, possibly ore.¹ However this may be, copper and iron smelting may have been one of the industries of the people who after death were laid to rest in the Harlyn cemetery. Iron ore occurs naturally in quartz veins on

¹ Mr. Lamb writes: 'There are many other mortars of Cataclews stone to be seen. There are several in the entrance of the [once] buried church of St. Enedoc, near Rock [on the east side of the Camel opposite Padstow].' It appears, therefore, that the mortars are of medieval date.

Constantine Island and probably elsewhere in the neighbourhood. An iron knife was found on the island and iron occurs fairly frequently in the graves. This does not of course prove that it was smelted on the spot; but it is comparatively rare in other parts of England in pre-Roman times. In any case so obvious a source would hardly be overlooked.

A piece of tin ore was found in the Harlyn cemetery. Tin ore does not occur naturally in the immediate neighbourhood, and it must therefore have been brought there. Further excavation, if it reveals the site of the settlement, may reveal also traces of smelting. The distance by sea to the natural supplies is not great. The oak-forests on the steep sides of the valleys would provide the necessary fuel. We know that smelting operations were conducted at trading stations elsewhere, notably at Hengistbury Head in Hampshire (the port of Salisbury Plain); and that in the Bronze Age palstaves were cast in clay moulds at Southampton. Iron occurs naturally at Hengistbury, but the raw copper must

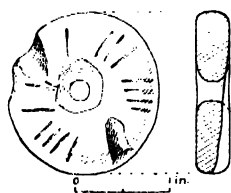


FIG. 12.

have been taken by sea to Southampton from Brittany or Cornwall.

Harlyn should in fact prove another Hengistbury, if geographical position means anything at all.

The natural supply of flint is another factor which would add considerably to the attractions and possibilities of the site in pre-historic times, in a region otherwise almost devoid of it.

Slate was another useful stone that is found at Harlyn. Implements of slate were said to have been found in the cemetery, though some of those exhibited in the museum are clearly natural. Amongst them are the slate dagger (*Harlyn Bay*, pl. 5, p. 31) and the slate needle (*ibid.*, p. 23, fig. 4). The slate sharpener found in the barrow with the dagger has already been mentioned. Slate was in great demand in the Bronze Age for sharpening daggers, and doubtless many of the honestones found in the Wiltshire barrows by Sir Richard Colt Hoare were carried thither from Cornwall along the Harroway. Slate was also used for spindle-

whorls. One such of a soft stone was found on land adjoining Trevoze by Mr. Biddick (fig. 12). It is 4 cm. (1·54 in.) in diameter and 0·96 cm. (0·37 in.) thick. It is ornamented by incised lines radiating irregularly from the centre, one face having been split off. It now belongs to Mrs. Taylor of Whitworth.

The presence of *Purpura lapidula* in the middens suggests that dyeing was one of the industries at Harlyn; perhaps derived from the Mediterranean.

I must not conclude without expressing my grateful acknowledgements to those who have assisted me in writing this account, and in particular to Mr. R. W. Hooley, F.G.S., Mr. C. Lamb, Mr. Hellyar, and Mr. and Mrs. Taylor, whose help has been invaluable.

An English Fifteenth-century Panel

By H. CLIFFORD SMITH, M.A., F.S.A.

[Read 17th February 1921]

A PANEL (pl. x), which is of oak, 3 ft. 7½ in. high, and 18 in. wide, with a painting of the Annunciation in gold and colours was purchased recently from a small dealer in Bury St. Edmunds by Mr. A. H. Fass. It presumably came originally from that neighbourhood; but nothing further is known of its history.

The Virgin kneels facing with clasped hands. Her hair descends upon the shoulders, the head is encircled by a halo. She is in a scarlet tunic powdered with gold flowers, over which is an emerald-green mantle with a narrow border of sage green, and traces of a purple lining. Above her head, to the right, is a figure of a dove, now almost entirely obliterated, representing the Third Person of the Trinity. Behind her is a canopy from the back of which hangs the representation of a cloth of gold hanging, here rendered in black and yellow, with a large pattern of branches and pomegranates. The canopy itself, which is crimson and bordered with green, is pointed and circular; on each side hangs a curtain gathered up in the manner in which bed curtains of the period are commonly represented.

The floor of the room has the remains of a pattern of what may have been black and white tiles, of which only the black now shows. To the left, on a small plinth, is a wooden prayer desk which is L shaped, somewhat reminiscent of the returned corner of quire stalls; the lower part of one section of the desk is formed into a cupboard showing a small hinged door ajar; the upper part of the desk is covered with a loose green cloth. Across the top lies a white scroll lettered: 'Ecce ancilla do[mini]'. On the other part of the desk further to the right of the Blessed Virgin lie side by side a small roll in a dark red binding and a clasped book with a scarlet cover. Above the desk is the wall of the room of dull grey colour.

To the right of the Blessed Virgin is a small kneeling figure of a Grey Friar or Franciscan dressed in the habit of the order, including a rope girdle with three knots; his hands are clasped in prayer, and issuing from his mouth is a scroll inscribed: 'Miseratrix a[n]i[m]e mychyl ab hoste p[ro]tege'.



FIFTEENTH-CENTURY PANEL OF THE ANNUNCIATION

It will be noticed that the capital *E* of *Ecce* is in Lombardic; while the *M* of *Miseratrix* is in black-letter. Both are coloured red.

Above, on the wall of the room, standing upon what appears to have been a small bracket, the colour of which has gone, is a two-handled pot inscribed *ihc*, containing a lily in flower with three main branches. Suspended upon these branches is a small figure of our Lord as if crucified. An exactly similar example of this rare treatment of the subject occurs in some fifteenth-century glass in the tracery of a window in the north aisle of St. Michael's, Oxford, and again, upon a larger scale, in the very splendid glass (also of the fifteenth century) which forms the middle light of the three-light east window of Westwood Church, Wilts., between Bradford-on-Avon and the Somerset border. It also occurs on a wall painting in Godshill Church in the Isle of Wight.

Higher up in the wall is shown a round-headed window with iron stanchions and plain quarry glazing such as is commonly found in fifteenth-century miniatures in MSS. Above the wall, on the right of the canopy, is a small figure of the First Person of the Trinity in a mandorla of red rays, within a narrow border, on which are white rays on a greenish-grey ground. The figure, wearing an arched crown and vested in a crimson cope, has the right hand stretched downwards in blessing.

Behind the canopy is a distant landscape with a greyish sea and sky; there are islands in the sea and birds in the sky (represented by small black crosses). On the left of the canopy are rocks, and one or two ships, with birds sitting on the water. The edge of the painting at the top of the panel indicates that the tracery enclosing it had a depressed trefoiled head sub-cusped.

The figure of the First Person of the Trinity, the figure of our Lord on the Cross, the Holy Dove, and the face and hands of the Virgin have been deliberately defaced, presumably in Puritan times.

While one cannot entirely exclude the possibility of the painting having formed the panel of a rood screen, the figure of the donor suggests that it originally formed part of a comparatively small structure such as a reredos, with a corresponding panel painted with a figure of the archangel Gabriel. The owner, Mr. Fass, as I have already said, purchased the panel from a dealer in Bury St. Edmunds, and the figure of the kneeling Franciscan, named Michael, who was evidently the donor, suggests that the painting was executed for the member of a friary either in Bury or the immediate neighbourhood. There was, we know, a house of the Franciscan Friars in Bury St. Edmunds. Other places in that

locality in which the Grey Friars were established were Ipswich, Dunwich, and Cambridge. The seascape in the background would seem to point to a seaport town such as Dunwich, but where it was actually painted is, of course, a matter of mere conjecture. English medieval figure-painting on panel is, however, of such rarity that any surviving examples should be carefully treasured; and I am pleased to be able to state that Mr. Fass has generously presented the panel to the Victoria and Albert Museum.

DISCUSSION

THE SECRETARY thought the painting not so fine as that in Colchester Museum, but pointed out a resemblance in the kneeling figure of the donor. The faces had been obliterated, but the panel had remained in the same position after the Reformation, its natural place being in the screen. There were plenty of screens in East Anglia with the faces of the figures obliterated and in some cases repainted.

MR. AYMER VALLANCE suggested that the panel had formed part of a reredos. At Attleborough, in Norfolk, the screen had been moved to the west end, and parts of it had solid panelling to the top, with paintings of the kind exhibited. The panel was much too tall to have fitted into the lower part of a screen.

THE PRESIDENT said the exhibit was of interest on account of the scarcity of English painting of that or any earlier date. He shared the opinion that the panel was too high for inclusion in a screen; and was in favour of an East Anglian origin, as such productions would not travel far. Thanks were due to Mr. Clifford Smith and the owner of the panel.

Further Observations on the Polygonal Type of Settlement in Britain

By Lt.-Col. J. B. P. KARSLAKE, M.A., F.S.A.

[Read 24th February 1921]

IN a previous paper¹ which I had the honour to submit to the Society on Silchester and its affinities to the pre-Roman civilization of Gaul, I described the definite resemblances in form of town-plan and other features of the settlement type to be found at Silchester (Calleva Atrebatum) and other similar early sites in this country, to known settlements of the Gauls in France and Northern Italy. From this I concluded that a considerable immigration of Gauls took place from France to this country somewhat prior to the first century of our era and subsequent to the expeditions of Julius Caesar; that a permanent settlement of these Gauls in South Britain resulted, and that they retained their national customs and institutions throughout the Roman and well into the Saxon period of our history. I further suggested that the general direction of this immigration was from the mouth of the Seine to the Sussex coast and inland towards the Berkshire Downs and the head-waters of the Thames. In the present paper an attempt is made to indicate with some measure of precision the main route followed by the immigrants towards the interior, and the area of their settlement.

A careful study of the maps of the Ordnance Survey, especially those of the 6 in. scale, reveals the existence between the Sussex coast and Silchester of earthworks or camps of polygonal outline so much resembling in form and general character the settlement enclosures of the polygonal type, that the conclusion seems warranted that they are the work of the same period and people; and it is possible to fix from their geographical distribution the general direction of the route followed, and the extent of country affected by the subsequent settlements of their builders. That this type of earthwork originated in France or Italy cannot be so definitely established as in the case of the settlement enclosures. Unfortunately in Northern France, where one would look for examples, the more intensive culture even of the higher ground, on which

¹ *Proc. Soc. Ant.*, xxxii, p. 185.

in this country so many of our camps have survived destruction, has centuries ago obliterated most of the early earthworks, so that there is by no means the same store of monuments of this character left as we have in this country. But in the Champ de Chastellier near Avranches¹ in La Manche one example survives which corresponds almost exactly to the camps found on this side of the Channel (fig. 1). The peculiar multi-sided or polygonal character of the design is very noticeable, and this feature is characteristic of all the camps to be discussed. It is true that the outline is not one of straight-ruled sides forming definite angles where they meet; rather the various faces of the enclosure change direction at fixed points, giving a general polygonal appearance. It is only when a straight-faced masonry wall supersedes the original line of bank and ditch as at Silchester, Chichester, or Canterbury that we get an accurate polygon. In the early earthwork stage they were clearly not accurately laid out with a tape, a general direction only being followed by the working-parties who constructed them.

The figures in fig. 1 are all drawn to the same scale, the outline representing the summit line of the vallum or rampart. This vallum is always single, of moderate profile, and the ditch corresponding to it somewhat shallow, the space occupied by the bank and ditch together being usually about twenty-five yards across.

On this side of the Channel it is at the point where I have suggested that the immigrant Gauls reached our shores that our series of polygonal camps begins.

On the south-eastern shore of South Hayling Island, just above high-water mark on the mud-flats of Chichester Harbour, is an entrenched camp, Tunorbury (fig. 1), whose origin has caused much speculation. It is remarkable in its situation, on a low-lying sea-shore, and I must particularly emphasize the fact that its peculiar outline can in no way be influenced by the contours of the ground, a factor which is so frequently urged to account for the peculiar outline of these polygonal structures, especially at Silchester. Its purpose seems obvious: to give support to a naval armament operating in the harbour; and its close resemblance to the Champ de Chastellier needs no demonstration. It must have a cross-Channel connexion.

The next of the series is the well-known Trundle² (fig. 1), on the hill above Goodwood race-course, which marks the first stage

¹ Coutil, *L'Époque Gauloise dans le Sud-ouest de la Belgique et le Nord-ouest de la Celtique*, p. 246.

² *V. C. H. Sussex*, i, 466.

in the advance from Regnum to Silchester. Except that its dimensions in area are some 50 per cent. larger, it is almost an exact counterpart of Tunorbury on the mud-flat. Proceeding inland over the heather-covered country of the Hind Head district towards Silchester, in some twenty miles we reach the chalk downs north-east of Winchester where are two more similar camps—Norsebury (fig. 1) and Oliver's Battery (fig. 1)—some eight miles apart and on either flank of what afterwards became the line of the Roman road from Silchester to Winchester.

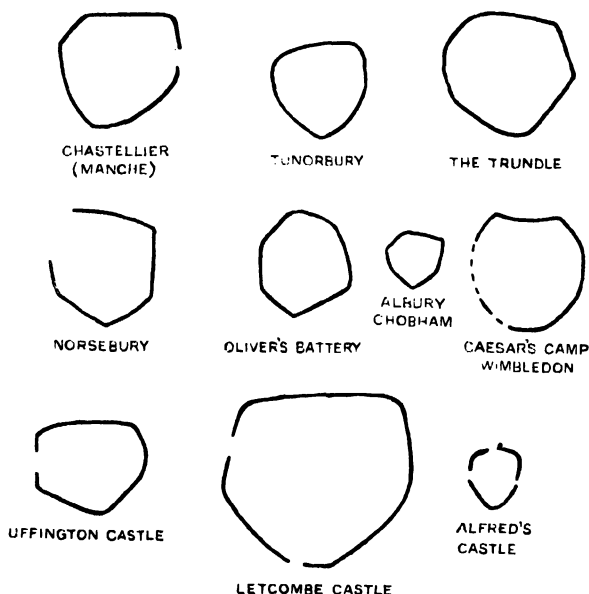


FIG. 1.

Silchester lies some twenty-five miles beyond, and brings us to the western extremity of the series of heathlands covering the Bagshot sands and stretching eastwards with few interruptions to the Thames at Richmond and Wimbeldon.

There is evidence that one stream of immigration turned in this direction on the route which was later followed by the Roman road to London. At Chobham, twenty miles east of Silchester, is a small camp of the series, Albury Bottom¹ (fig. 1), some half-mile east of Chobham Place, which, like Tunorbury, occupies a position in a marsh. As it is surrounded on all sides by higher ground, it is difficult to appreciate the object of its situation, except

¹ *V. C. H. Surrey*, iv, 394.

that the marshy ground afforded a difficult approach. Here, again, its outline can be in no way attributed to the configuration of the ground. Further east, again, is at Wimbledon the so-called Caesar's Camp¹ (fig. 1), and, in spite of the defacement it has suffered and yet suffers, one can still make out sufficient of its outline to determine its resemblance to the type I have described. Whether or no any permanent occupation of this area between Silchester and the lower Thames resulted, I have so far no evidence to adduce, nor do I think it probable. But it was in a direction north and west of Silchester that the main stream of occupation and settlement seemingly flowed, attracted doubtless by the open chalk downs which afforded a safe and plentiful feeding ground for the flocks or herds of an agricultural people.

If we start from Silchester and follow the direction of the Roman road towards Speen we shall find ourselves on the original route to the Berkshire downs. This route crossed the Kennet at Aldermaston and at once ascended in a north-westerly direction to the high ground above the valley at Upper Woolhampton. Here it turned to the west following the crest of the hills across Bucklebury and Coldash Commons, open heathlands, until it reached Grimsbury Castle, an earthwork probably of the Bronze Age, above Hermitage.² Here it divided, one branch going westerly following the hills north of the Lambourn valley, the other north-westerly towards the higher slopes of the downs above Wantage, by a route which still for a considerable distance is known as the Old Street. In either direction the traveller would emerge on the open chalk downs, a country which can have changed but little in its general appearance in the course of the many centuries which have elapsed since the period with which we are dealing. Both routes lead by a gradual incline to the summit of the downs, which present a steep escarpment towards the Vale of White Horse and the upper Thames valley. Along the edge of the escarpment runs the well-known Ridgeway, a line of communication from west to east which must have been used from the earliest dawn of civilization.

In close proximity to this route along the downs are three encampments: on the east Letcombe castle³ (fig. 1); further west Uffington castle⁴ (fig. 1), and, rather thrown back on the west, Alfred's castle⁵ (fig. 1) on the extremity of the Lambourn valley route. All these reproduce the same features as the

¹ *V. C. H. Surrey*, iv, 389.

² *Trans. Newbury District Field Club*, iv, 138. *V. C. H. Berks.*, i, 257.

³ *V. C. H. Berks.*, i, 261.

⁴ *Ibid.*, 262.

⁵ *Ibid.*, 253.

other camps I have described. They seem to indicate a line taken up to protect the territory to the south, and mark probably a definite stage in the advance of their builders towards the interior of the country. The White Horse itself, cut into the turf below Uffington castle, has a close resemblance to the horse depicted on the British coins of the period to which I suggest these earthworks belong.

Can we find any traces still existing of a permanent occupation of the downlands between this line and the great settlement at Calleva? A close study of the large scale maps, to which I can add a fairly intimate knowledge of the ground acquired by many years of manœuvres on the downs, reveals unmistakable evidence of at least two other settlement enclosures which resemble in form the earliest period of Calleva.

These downlands, as might be expected, have yielded evidence of occupation by man throughout the various stages of civilization from the Stone Age onwards, and the traces of the Roman era are fairly uniformly distributed over its surface. But it is worth noting here that traces of early Saxon occupation, except for one cemetery at Shefford half-way up the Lambourn valley, are conspicuously absent; and even at Shefford there was certain evidence of absorption of the Saxon settlers by the native population.¹ In spite, however, of the many remains of earthworks belonging to several prehistoric epochs, which still survive, there are certain features which indicate a definite Gaulish occupation on the same model as Silchester.

If the westerly route is followed to the very ancient town of Lambourn (fig. 2), a favourite residence of King Alfred, the impress of original polygonal form of defences, bank and ditch, enclosing an area rather smaller than Calleva but very similar in outline, can still be seen. In Lambourn park on the north-north-east the line of entrenchment is very clearly defined, and is shown on the 6 in. Survey maps: on the east it is not so well preserved but still can be clearly followed across the meadows on this side of the town, and in places the ditch is still a marked feature although the bank has been scattered. On the south the line has been preserved by the encircling road; it is only on the south-west that little trace remains. Here there has been considerable building in modern times. One entrance, on the north-east, can still be clearly traced, together with the outer works by which it was protected, very similar in design to the north entrance at Old Shoreham and to the east entrance at Silchester in the outer entrenchment. The road or track which leaves this entrance

¹ Baldwin Brown, *The Arts in Early England*, iii, 184; iv, 650.

goes across the downs by the Seven Barrows to Uffington and the White Horse. That it was surrounded by a *leuga* radius territory, a *leugata*, is indicated by a point still known as the Mile End on the north, at the *leuga* or eleven furlong distance. That Lambourn was occupied during the subsequent Roman period there can be no question, since coins and pottery have been turned up at various times in the town, proving an occupation from Vespasian to Magnentius.¹

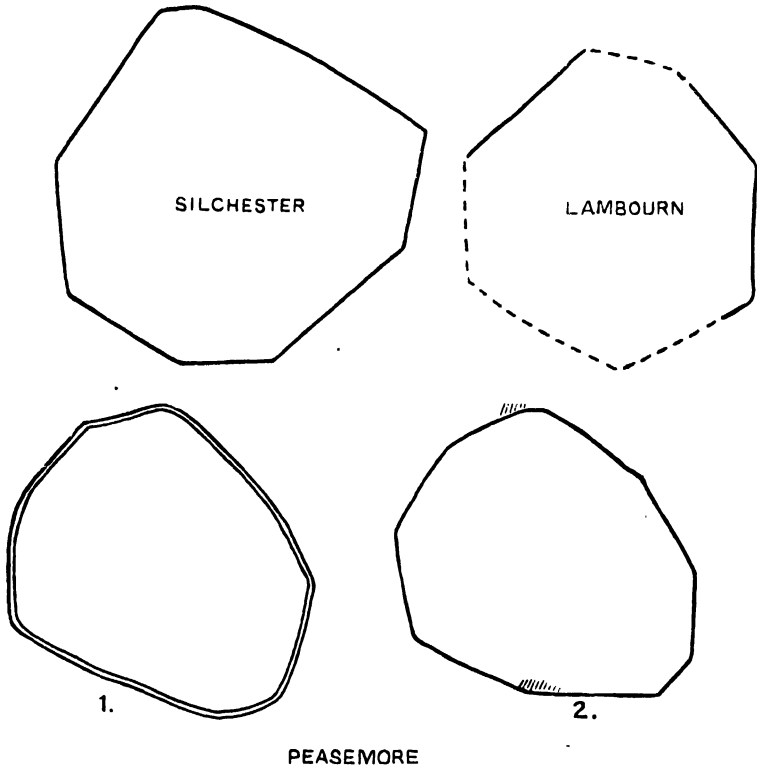


FIG. 2.

The parish of Lambourn is very extensive and comprises the whole of the Hundred to which it gives its name. It has a total area of 14,860 acres and is by far the largest parish in Berkshire, if not in England. It comprises several separate manors, some of which are certainly as old as Alfred's time. It is an oval area with the town of Lambourn in the centre, and, taken in conjunction with the evidence we have of the absence of early Saxon settlement of the downlands, is significant, as suggesting a

¹ *Trans. Newbury Field Club*, iv, 204.

different origin to that seemingly forming the normal parish area of the Saxon 'tun'.

Some eight miles east of Lambourn is the little village of Peasemore or Peysmer (fig. 2). It at once strikes the eye when seen on the map by a polygonal area surrounded by a road, some 660 yards in diameter, almost exactly corresponding in size to Lambourn. Except for the church and a few houses at its northern extremity the area enclosed is to-day all arable land, and to an observer strikingly reminiscent of Silchester. Here the road which must once have followed the line of the outer side of the ditch is all that remains, except that on the south-west angle some fifty yards of the ditch, broad and deep, remain to show that it once encircled the settlement; a pond near the church is a part of this ditch. Otherwise a good soil and centuries of cultivation have obliterated all other signs of occupation. The *leugata* is still perpetuated in a hamlet called World's End on its north-east boundary, and by another called Down End on its southern boundary, but no definite Mile End remains for exact measurement. No Roman remains, so far as I know, have been found on the site, but there are records of finds of coins, pottery, etc., and of a burial of that period just beyond the *leuga* distance. But sufficient remains at Lambourn and Peasemore to tell us that here were Celtic settlements with their communal territory surrounding them, smaller but otherwise closely corresponding in form to the chief city at Calleva.

From the evidence I have adduced this conclusion is I think warranted, that here we have among these remote valleys in the downs a territory stretching from Calleva which once formed part of the *civitas* of the Atrebates, perhaps the whole. We can still see dimly through the mists of ages, but none the less unmistakably, the outline of a Gaulish *civitas* or canton as it existed in the pre-Roman days. Moreover, it corresponds very closely to similar conditions which we know existed in Gaul, and which have been described by M. Fustel de Coulanges in his work on Gaul in the Roman period.¹

La *civitas* occupait un territoire étendu. Il était ordinairement partagé en plusieurs circonscriptions, auxquelles César donne le nom latin de *pagi*. Dans ce territoire on trouvait, le plus souvent, une ville capitale, plusieurs petites villes, un assez grand nombre de places fortes; car il y avait longtemps que chaque peuple avait pris l'habitude de se fortifier, non contre l'étranger, mais contre le peuple voisin. Dans le territoire on trouvait encore une multitude de villages, *vici*, et des fermes isolées, *aedificia*.

¹ Fustel de Coulanges, *La Gaule Romaine*, p. 10.

La ville capitale is represented by Calleva, the administrative centre of the *civitas* or canton, the city of the Atrebrates, which in course of time adopted a Roman form, with forum and other public buildings, and connected up with the road system of the Empire, while still retaining its local independence and administering its communal lands on a Celtic and non-Roman system. The territory subject to it is divided into *pagi* or rural districts each with its *petite ville*. We can see the traces of two, Lambourn and Peasmore, and may it not be that the existing parish and hundred of Lambourn, so unusually large for a parish, are the district of the *pagus*?

Of the character of these smaller towns we can recover something. They lie away from the main Roman highway and perhaps were little affected by the manners and customs of Rome. An earthen rampart and ditch sufficed for their defence, even when Calleva had to protect itself behind a massive wall. The absence of remains of Roman building suggests that the habitations of the villages were of the round wattle and daub type covered with thatch. But, like the chief city, they had for a *leuga* radius from their settlement the communal lands in which they exercised complete independence.

Now it is the survival of evidence of this *leuga* radius, or as it is called in early French law the *bannum leucae*,¹ which is so interesting to our inquiry. Because it is by a study of the incidents which attached to this particular form of jurisdiction on the other side of the Channel, that we can recover some idea of what the organization of the Gaulish settlement or village community was like. Anything like a detailed examination of this fascinating subject is impossible in the space at my disposal even if I were competent for the task; and even among students of early French institutions the origin of the *bannum leucae* as a Gaulish institution is only vaguely suspected by reason of the *leuga* being the Gaulish measure of length.² No *leuga* radius such as we have at Silchester, definitely to be identified as an integral part of the town plan, has been recognized in France so far as I am aware. And it is only in France, when that country was beginning to settle down to organized government after the chaos of the barbarian invasions, that the *bannum leucae* of the towns becomes a recorded feature. In early charters granted to these towns from the tenth century onwards by

¹ Gondetoy, *Dict. de l'ancienne langue française du IX^e-XV^e siècle*, s.v.; du Cange, *Glossarium*, s.v. *Bannum*.

² For detailed summary of classical references to the Gallic *leuga* see A. Holder, *Alt-Celtischer Sprachschatz*, vol. ii, p. 197 s.v.

Frankish kings and bishops we find reference to the privileges they claim to enjoy within their *leuga* radius. First and foremost the most complete local autonomy, civil and criminal; no outsider, be he count or any other authority, can interfere in their affairs. Then the right of the inhabitants, or duty, to serve under their own banner when called upon for military service, the so-called *here-bannum*: and in this connexion it is interesting to note that the train bands of London assembled under their own leaders till the seventeenth century at their Mile End. And, lastly, we have many references to the communal possession of the land and certain necessary institutions such as a common mill and oven, at which corn must be ground and baked, a common wine-press, and certain communal animals such as bulls and boars, later known as the *banaliés* of the village. And when we add to this the assumption that I ventured to put forward, when examining in my previous paper the origin of the *leuga* as a measure of length, that it grew out of the custom of cultivation in the long furrow or long rig system which we find surviving in the medieval English manor, we can picture for these early settlements a system strikingly resembling the manorial system of feudal times, sufficient to warrant the claim that in the Gaulish *civitas* is to be found at least the germ of our manorial land system.

The *places fortes* remain in the 'castles' of Ietcombe or Segsbury, Uffington, and Alfred, commanding the Ridgeway from any attack from the Berkshire Vale to the north, and may have been strong enough to prevent until a late date any invasions of the downland territory by the raiding band of Saxons who early ascended and settled along the waterway of the Thames.

And, lastly, one example of a *ferme isolée* remains to us: the entrenched enclosure on Lowbury Hill above Churn, excavated by Professor Donald Atkinson in 1913-14.¹ From the pottery he found it appeared possible that the site had been occupied continuously since about 400 B.C. But he says, 'of the pottery of the period just before and after the beginning of the Christian era there is a larger quantity, notably pieces of several squat, round-bellied jars. . . . This type occurs commonly in early deposits at Silchester, and though it would be rash to assert that none was made after A.D. 43, the greater number were probably earlier'.

'Moreover the first definite proof of direct Roman influence is late in appearing. . . . The finds show that somewhere about the end of the first century or the beginning of the second, the

¹ Atkinson, *The Romano-British Site on Lowbury Hill*, pp. 25 foll.

inhabitants began to come under the influence of Roman civilization'. When this came about, 'the large number of exact parallels with objects found at Silchester, including the pottery found about the kiln outside that town, tempts one to figure them going down to Silchester from time to time to do their marketing and to see life'. And Professor Atkinson seems to arrive from an entirely different standpoint at the same conclusion. 'As I read the evidence', he says, 'from such sites as Lowbury and Pitt Rivers villages, the conquest of the country south of the Thames, rapid and probably meeting with little opposition in spite of Vespasian's thirty battles, made little or no immediate difference to these remote settlements. In Britain at any rate the Celts seem to have acquired late, if at all, the ἀστυνόμοι ὄργαι.'

I go perhaps rather further, concluding as I do from the evidence which has come down to us in the sites I have described, that life went on with but little change in essentials during the Roman occupation. The Gaulish *civitas* remained throughout a distinct unit in Britain until, when the legions were withdrawn, the *civitates* were told to provide again for their own government and security when they could no longer look to Roman power to protect them from outside enemies. In some measure the *civitas* of the Atrebates held out until such time as they became absorbed in Saxon England, not so much by conquest as by assimilation, but not before their settlements had shrunk to mere shadows of their former state. Even the great city of Calleva contains but a handful of population living among the dilapidated mansions of olden days. Perhaps the reason may be found in the narrative of Gildas, who, after describing the follies and quarrels of the British princes, says, 'A contagious plague fell so outrageously among this foolish people and without the sword swept off such numbers of them, that the living could scarce bury the dead'.¹ Perhaps this plague was the yellow death that caused such ravage in Europe in Justinian's reign and which seems to have been as deadly as the Black Death of the fourteenth century.

Be the cause what it may, there seems no doubt that the population dwindled away until but a feeble remnant remained to preserve a dim tradition of former prosperity and a recollection, recorded in place names, of the former ordering of their settlements. The deserted farms were, perhaps, as at Lowbury, later reoccupied by Saxon farmers. The settlements decayed and were avoided by fresh inhabitants, until such time as the city of Calleva and its *leugata* became the *allod* or manor of a Saxon

¹ *Historia Gildae de excidio Britanniae* § 22. 10.

king. But the boundaries of its territory were not forgotten. They subsist to our own day, defined almost as clearly as when first roped out by the first inhabitants. Only Lambourn survived. Its remote position, its plentiful water supply from the Lambourn sources, its sheep-walks on the downs, contributed to perpetuate its existence as an upland town. Here King Alfred found a safe retreat in the darkest days of the Saxon power, and as a cheaping or market town of the downs it has remained almost to our own days within its old entrenchments, little affected by the changes of the outside world.

The conclusion, then, that I put forward, is that a definite system of social organization was introduced into this country from northern Gaul not long before the inclusion of Britain in the Roman Empire ; that it was not superseded, at least in the territory of the Atrebates, by any social or land system based on the Roman model, and that it continued substantially unchanged after the Roman administration was withdrawn ; and, lastly, that to this system we owe the bases of our modern land measures, and probably much of the methods of land cultivation which survived until a comparatively recent date.

Beyond that at present one cannot go further than to recognize that Teutonic settlement ultimately did more to efface the Gaulish system here than it did in France, where we must look, especially in north-eastern France, for further light on this subject.

I conclude with a final question. Can we be sure that these northern Gauls were Celts, and not rather Teutons, in other words an advance guard of the Franks and Saxons who followed them five centuries later ?

DISCUSSION

Mr. C. L. KINGSFORD (Chairman) said the paper showed clearly the relation between history and archaeology. During the last forty years the value of potsherds had been established, and the evidence they afforded was in most cases undeniable. Field investigations of the kind described in the paper were pioneer work of great interest, and opened up new lines of study.

Mr. BUSHE-FOX was struck by the lack of finds, especially at Peasmore. As the sites in question were not supposed to be places of refuge, more relics of their earliest inhabitants should have come to light. Lowbury was said to belong to the Gaulish immigrants, but the pottery there was distinctly early, dating from the third or fourth century B.C., whereas the invasion was dated after Caesar. He noticed also that the *octroi* stations were only on one side of the enclosures,

but three would be required at Silchester to control the approaches from other directions.

Mr. PAGE said the paper was very welcome as so little was known of the organization of Roman Britain. Professor Haverfield had pointed out that the cantonal system was certainly adopted, but not so thoroughly as in Gaul; whether it survived the Roman period however was doubtful. There were many Lowes or Liberties in the country, but most of them could be traced to the tenth or eleventh century, such as the Lowy of Pevensey (a waste-chester in Saxon times), which was not referred to before the Norman castle was built. There were also the *banlieues* of various monasteries, such as Ramsey, Bury St. Edmunds, Malmesbury, and St. Albans; but survival from Roman times was not likely even at Verulam. It would be interesting to trace the *leugata* of London, but the boundary was probably irregular and may have been altered from time to time.

Mr. ALBANY MAJOR laid emphasis on the value of earthworks and early customs. He knew of three Grim's Ditches which would be included in the territory of the Atrebatas, and there was evidence that at certain periods they formed the boundary between the Britons and Saxons, though the name had not been satisfactorily explained. It was his intention to study some of the earthworks on the lines laid down by Colonel Karslake.

Mr. LYON THOMSON asked if the plans of earthworks shown on the screen were arranged to show uniformity of shape or were all orientated in the same way.

Mr. PALEY BAILDON inquired what manorial customs pointed to a Gaulish rather than to a Saxon origin for the enclosures described in the paper. The Gauls should have left traces easily distinguishable, and he had long searched for indications of a village community in England, without success.

Colonel KARSLAKE replied that Roman coins had been found at Lambourn dating from Vespasian to Magnentius (A.D. 69-353), but Peasemore was disappointing. He had only casually searched the ground, and would point out that between the walls and outer enclosure of Silchester very few traces of Roman occupation could be found on the surface, but 9-10 in. below it were abundant remains of circular or quadrangular British dwellings, which had basin-shaped ovens or fire-places in the middle. The brick-like fragments found were probably remains of wattle-and-daub; and early British pottery was soon disintegrated by frost on the surface. At Lowbury some pottery certainly dated back to the fifth century B.C., but the ware found in abundance was only made just before the Christian era. Except at Silchester no *leugata* could be said to have survived in England; but in the *Dialogus de Scaccario* every town in which the king's taxes were collected had a *leugata* beyond which those in charge of the taxes were forbidden to go. As relics of a communal

system, he cited the common mill, oven, and wine-press, which later, in Gaul, came under the control of some Frankish count who used them for his own advantage. In the tenth and eleventh centuries the dependent population began to secure privileges, and *leugatae* were given to Ripon and Battle Abbey. There was a Mile End at Colchester, and traces of a *leugata* at Leicester, but it could not be proved of Roman origin. At Silchester the barrier was on the north for levying tolls on goods going south. It was placed where the roads joined and only one route was practicable. The diagrams were not arranged according to compass bearings, but in order to show the similarity of outline, the flat side being the front, and the point marking the rear of the defences. Lambourn retained some remarkable manorial customs. The charters in France and England were very much alike, but the comparison had not been fully worked out. They appeared to have a common origin.

A Neolithic Bowl and other objects from the Thames at Hedsor, near Cookham

By E. NEIL BAYNES, F.S.A.

[Read 10th February 1921]

By permission of Lord Boston I am able to exhibit the following objects found in and near the Thames at Hedsor:—

A neolithic bowl.

Three chipped flint celts.

A flint Thames pick.

Two bronze spear-heads.

Four iron spear-heads.

A bone dagger.

A Saxon bowl, and other objects.

The first item deserves full description and comment.

It is stated in *Archaeologia*, vol. lxii, pp. 340-1 (1910), that, besides the fragments of round-bottomed pottery of neolithic date from Peterborough; West Kennet, Wilts.; Rains Cave, Longcliffe, Derbyshire, and elsewhere, only three complete, or nearly complete, neolithic round-bottomed bowls have been found in England, and all of them in the river Thames: one at Mortlake (now in the British Museum), and two at Mongewell, near Wallingford, which are in a private collection.

In the *Report of the Oxfordshire Archaeological Society*, 1912, p. 114, Mr. E. Thurlow Leeds, F.S.A., describes some fragments of neolithic pottery from Buston Farm, Astrop, Northants., and he believes that the decoration on the inside of the rim is one of the hall-marks of neolithic pottery.

A fourth bowl must now be added to the list, and this example, absolutely perfect, comes from the Thames, from Lord Boston's private water, a short distance below Cookham Bridge. It was found when ballast was being dredged, not far from the upper Hedsor weir, lying on the peat which underlies the ballast, the latter being about six feet in depth. Cracks in the side of the bowl were apparently full of peat (fig. 1).

The bowl itself is about seven inches (6.85 in.) in width and exactly five inches in height, thus corresponding almost exactly in size to the Mortlake specimen, which is 6.9 in. across, 5.1 in.

high, and with walls 0.3 in.¹ The Hedsor bowl is slightly the thicker of the two, measuring half an inch at the bottom, and at the side about three-eighths of an inch (0.4 in.). Its weight is 2½ lb.

The paste is hard, of a yellowish brown colour, and many fragments of flint are embedded in it to give it strength. The neck turns slightly inwards, and then extends outwards over the usual hollow moulding on which some finger impressions can be



FIG. 1. Neolithic bowl from the Thames.

distinguished. Below the shoulder of this moulding the bowl is approximately hemispherical.

The decoration consists of fifteen horizontal lines of impressions, twelve of them being made with twisted sinew and three with sinew tied in a reef-knot. Two lines in the interior, immediately below the rim, and two lines on the rim itself, have been formed with twisted sinew in a herring-bone pattern. Two lines at the top of the hollow moulding are of similar impressions, but both follow the same direction. Immediately above the shoulder is another similar line, and below it two lines of the same description

¹ The Wallingford bowls are respectively 2 in. and 1 in. narrower (*Archaeologia*, lxii, pl. xxxviii).

forming the herring-bone. Next come two similar lines, but these follow the same direction. The lowest four lines consist of an almost unbroken knot-pattern, made by successive impressions of a reef-knot loosely tied in sinew or some similar substance. The topmost of these four lines is of better execution than the other three—probably because this was at the most convenient level for making the impressions. The bottom two lines have been obliterated in places. Where the knot has been applied sideways the mark of the thumb nail is visible.

The result of experiments made with a reef-knot tied in a gut string and pressed into soft modelling wax was a pattern similar to that of the lowest four lines of impressions on the bowl (fig. 2). Where the pattern on the bowl is most even, the best results have



FIG. 2. Wax impression made from side of bowl.

been obtained by causing one impression to cover and obliterate the side of the last impression, thus producing a pattern which is, apparently, an endless knot-pattern instead of a design formed by separate knots.

For the purpose of experiment the knot should be tied with all four ends of even length, about 3 in., and the easiest way to apply the knot is to place it on the tip of the left thumb, with the upper loop at the edge of the thumb nail. The ends which pass through this loop are turned up out of the way against the thumb nail and are held there by the first finger of the right hand. The other two ends are bent up the ball of the left thumb and are kept taut by the first finger of the left hand. With a little practice the impressions can be made evenly.

It was found that the best imitation of the usual twisted sinew design could be produced with a piece of twisted gut held over the top of the first finger of the left hand and nipped by thumb and second finger. The sinew, or other substance, which was

used in ornamenting the bowl was evidently not of the same diameter throughout its length.

This is, apparently, the only evidence we have that neolithic man, or woman, knew how to tie the reef-knot, and also the first occasion on which it has been identified as a decoration on contemporary pottery. It is creditable to his memory that he evidently realized the advantages of the reef-knot over the 'granny'.

It is curious that these four bowls have all been recovered from the Thames. Can they have floated away from settlements during flood time? The Hedsor bowl floats easily with an inch and a half out of water.

The elegant shape and the carefully applied design should place the bowl at a late period of the Neolithic Age, and the reef-knot design will form a feature for comparison with other specimens of this early ware.

Lastly, I would suggest that the evidence of finger-prints should not be treated too lightly. The prints on the Hedsor bowl are only of the finger-tips, and the lower part of the ball of the finger, which bears the most distinctive markings, does not appear. Finger-prints on two or more vessels of pottery, if identical, would prove beyond doubt that those vessels were made by one and the same person, although not necessarily either at the same time or place.

DISCUSSION

MR. REGINALD SMITH called attention to the fact that most specimens of the neolithic type in question came from the Thames, and that Hedsor lay in a direct line midway between Wallingford and Mortlake. Fragments had been found in Wilts., Northants., Derbyshire, and Cheshire, showing that the type was not at all confined to the Thames basin. The present specimen was lighter in colour than usual, some being a lustrous black. The same method of decoration was found in Denmark, but the hemispherical bowl with deep hollow moulding below the lip was apparently confined to England, and evidently dated from the period of the long barrows. The two bronze spear-heads illustrated different stages in the progress of the loops from the end of the socket upwards into the blades, the smaller being the later of the two. Early Iron Age spear-heads were no doubt copied from cast bronze models, their sockets being normally cylindrical, whereas those of the Anglo-Saxon and Viking periods were generally split, the edges not being hammered out to meet. The bone dagger was a rarity, comparable to those figured from the Layton collection (*Archæologia*, lxix, 13), but not easy to date with precision, nor were similar horseshoes in the same collection; but authorities agreed that the type with invected edge dated from the Early Iron Age.

MR. LEEDS had recently taken impressions of the ornament on neolithic potsherds found at Buston Farm, Astrop, Northants., and found that the so-called 'maggot' pattern had been produced by a twisted cord of two strands. The other vessel exhibited was certainly Anglo-Saxon, the irregular straw-markings on the side being characteristic of that period.

MR. BAYNES replied that the neolithic bowl had been somewhat darkened by being soaked in gelatine to prevent the slight cracks from sprcading. Lord Boston regretted his inability to attend the meeting, but would be pleased to hand over the neolithic bowl to the British Museum.

LT.-COL. CROFT LYONS (Chairman) expressed the Society's indebtedness to the author and to the owner of the exhibits. The national collection was certainly the proper place for such a rare and perfect piece of pottery. He thought that the grit in the paste would not tend to strengthen the ware in firing, and considered its presence due to faulty preparation of the clay.

Note on a Hoard of Iron Currency-Bars found on Worthy Down, Winchester

By REGINALD W. HOOLEY, F.G.S.

[Read 17th February 1921]

IN the year 1919 it became necessary to excavate to a depth of 2 ft. over a given area on Worthy Down, near Winchester. At the north-east corner of the excavation a number of iron currency-bars were uncovered. None of the excavators knew what they were at the time and they were thrown aside, but one of the party, Mr. C. H. Blenkinsop, eighteen months after, on visiting the British Museum, noticed similar objects labelled 'Iron Currency-bars'. He returned to the site, collected several bars, and brought them to me. A few days afterwards I examined the ground in his company. The excavation was oblong, with its long axis east and west, and the section exposed showed 6 in. of soil and 1 ft. 6 in. of chalk. At the north-east angle was seen what appeared to be the section of one of the sides of a shallow trench filled with earth, chalk-rubble, and burnt flints. On digging to remove the turf on the surface contiguous to this section, the spade was checked by several iron currency-bars, which lay hidden by the grass that had grown over them since they were cast out. At 1 ft. 6 in. below the surface I found the end of a bar $8\frac{3}{4}$ in. long, which fitted on to one of the bars already in my possession. The exact position and level of the original discovery were thus known. At a depth of 2 ft. the chalk was reached. The digging was then directed eastwards, and it was found that the soil deepened. A seam of flint 'pot-boilers' and charcoal was met with at 2 ft. 6 in. A fragment of a human cranium, bones and teeth of (?) horse, ox, pig, and sheep, with pieces of pottery were also found. These discoveries occurred on the 13th August 1920. Further excavations were made on various dates. At a depth of 3 ft. another layer of burnt flints, mingled with bones of the same mammals, the skull of a small dog, and a portion of a triangular loom-weight were obtained. At this level the excavations were continued, and the

chalk was reached on the east side and observed to have a slope similar to that on the west. As the digging proceeded the chalk was exposed on every side, and it became evident that it was the rim of a pit. At a depth of 4 ft. bones, teeth, pieces of pottery, and burnt flints were discovered. At 5 ft. abundant burnt flints, fragments of pottery, a flint muller, bones, and teeth were met with, and subsequently the bottom of the pit was reached. A small piece of iron was found in the earth thrown out, and on the floor there were horn-cores and part of the frontal bone and the mandible of a sheep, bones of horse, ox, and pig. One ox femur exhibits cuts, and many split bones were observed, two of which had similar indentations. There were also fragments of pottery, and many burnt and smoked flints.

The floor of the pit was 6 ft. 8 in. below the surface. The pit was circular, with a diameter of 6 ft. 4 in. ; the walls were vertical and the floor was at right angles to the walls and flat. The rim had a slope of 45° , was 3 ft. wide, and its inner edge was 3 ft. from the present surface. There were no steps in the chalk giving access to the pit, no hole in the floor for a post to carry a roof, nor any fireplace visible. No traces of smoke existed on the walls or floor, and the chalk was as clean as if freshly hewn. No tool marks were discernible.

The currency-bars were lying on the western rim of this pit. The remains of about thirteen were found, and of these seven are perfect, varying from $32\frac{1}{2}$ in. to $34\frac{7}{10}$ in. in length. They are, as usual, flat, with squared edges. The extremity of the broader end is pinched in, so that the two edges in some cases meet in the median line, forming a sort of hollow handle. They taper in the other direction and terminate in a curved point. Judging by their weight, size, and the form of their handles, they belong to the double-unit denomination. In weight they vary from 553 grammes to 723 grammes. This lack of uniformity may to some extent be due to different degrees of waste from rust ; moreover, two of the bars have matter cemented to them by iron-rust, and another has a very small flint pebble in the hollow of its handle. The heaviest bar, which is $1\frac{1}{5}$ in. longer than any of the others and seems to have suffered the least, does not agree with the standard weight of the double-unit denomination of currency-bars. Notwithstanding these facts, the average weight of the seven bars is 631.7 grammes, which approximates very closely to the 623.7 grammes or 22 oz., the presumed standard weight of the double-unit. A portion of a currency-bar, which was broken by the spade, exhibits a clean, fresh fracture. It is remarkable that the interior appears to be quite unaltered, though there is a thin layer

of rust outside. The transverse sections exposed have all the brilliancy of an iron bar just manufactured. The metal has a marked crystalline structure and, on breaking a fragment in



Currency-bars from Worthy Down, Winchester ($\frac{1}{7}$).

a longitudinal direction, a similar structure and appearance were revealed. It is very tough, and strongly resists the action of the drill and the file.

WEIGHTS AND MEASUREMENTS OF THE IRON CURRENCY-BARS

	Grains.	Grammes.	Avoirdupois.	Measurement.	Remarks.
1.	8,531	553	19 $\frac{1}{2}$ oz.	32 $\frac{1}{2}$ inches	
2.	10,172	659.1	23 $\frac{1}{4}$ "	32 $\frac{1}{2}$ "	
3.	10,391	673.3	23 $\frac{3}{4}$ "	32 $\frac{2}{5}$ "	iron-rust incrustations.
4.	9,297	602.4	21 $\frac{1}{4}$ "	32 $\frac{2}{5}$ "	ditto.
5.	9,734	630.8	22 $\frac{1}{2}$ "	32 $\frac{7}{10}$ "	ditto.
6.	8,969	581.1	20 $\frac{1}{2}$ "	33 $\frac{1}{2}$ "	small flint pebble in the handle.
7.	11,156	723	25 $\frac{1}{2}$ "	34 $\frac{7}{10}$ "	handle partly destroyed.

The small flat piece of iron which was found is thicker than a currency-bar, and has convex instead of vertical edges. It tapers slightly at one end, and has a straight edge at the other, with a width of 1 $\frac{3}{8}$ in. Its weight is 2 oz. and its length 2 in.

All the pottery is hand-made. Three fragments, which fit together, formed a segment of the sides of a small, circular pot. It is made of well-baked clay of a reddish-brown colour; the paste is fine, with grains of sand and flint chips. It is straight-sided and the outer surface is striated, some material, vegetable or otherwise, having been drawn down the vessel for trimming purposes. The inner surface is smooth. The circumference is ascertainable from the segment of its circle preserved, the diameter being 3 in. and the thickness of the sides $\frac{5}{16}$ of an inch.

About a quarter of the base of a flat-bottomed pot, with similar markings on the exterior surface, was found. An interesting fact about the latter is that a precipitate of carbonate of lime, apparently produced by heated water, covers the interior surface.

A segment of another and larger straight-sided pot proves that its diameter was 7 $\frac{1}{2}$ in. and the thickness of the sides $\frac{5}{16}$ of an inch. It is made of a well-baked, very fine paste, mixed with a large proportion of sand, but with no flint particles. Both the inner and outer surfaces are smooth. The cooking-pots, of which the above are fragments, appear to be very similar to those from Oldbury Camp, figured in the *Devizes Museum Catalogue*, 1911, pl. xviii, fig. 1.

There is a piece of well-baked black pottery, containing sand, mica, and a large quantity of white flint particles, which are much exposed on both the inner and outer surfaces, and give it a speckled appearance. The rim is very thick and slightly out-turned to form an incipient beading, and the exterior surface is polished.

Another fragment is a well-baked piece of black clay, containing large and small grains of quartz and flint and mica particles. The exterior surface is smooth and has been subjected to bone polishing. Two small pieces of well-baked black clay appear to

be covered on both surfaces with red slip. The remaining fragments need not be detailed, except to say that one of them is $\frac{5}{8}$ of an inch thick and of dark-coloured paste, with the outer surface burnt red. Both the exterior and interior surfaces are easily impressed by the finger nail. The portion of the triangular loom-weight found is of burnt clay. It is pierced by an oblique hole. The flint muller possesses a square butt, well adapted to the hand, and the other end is rounded and much battered by use. Several fragments of tertiary sandstone, with one or more flat surfaces, were either portions of a quern or were used as whet-stones. Many small, rounded, tertiary flint pebbles with flat upper and lower surfaces were met with at all depths in the pit and may have been used as sling-stones.

Small fragments of soft, bright-red clay occurred throughout the pit. They readily leave a red track on being damped and drawn over an object and may have served the purposes of reddle.

Dr. C. W. Andrews of the British Museum (Natural History) kindly determined the mammalian remains. He reports in regard to the supposed horse teeth that they do not possess the characteristic enamel fold, but that this feature is sometimes absent in the horse. The skull of the dog belonged to an animal about the size of a terrier. It will be recalled that General Pitt-Rivers mentions that the size of the dogs found in the Romano-British villages of Woodcuts and Rotherly varied from the size of a mastiff to that of a terrier.

No Roman remains were found nor anything to suggest contact with Roman civilization. The site is on high ground about 330 ft. above O.D., with a gentle fall to the north, south, and east, and a rise to the west. No signs of other pits or depressions were visible, but by tapping the surface of the surrounding area, other pits were located and also a broad and long trench.

There are cultivation terraces to be observed within a mile of the pit. In the course of the excavations it was reported to me that half a mile to the eastward, when the foundations were being made for some buildings, many fragments of pottery were found. On hearing of this I went over the ground where the excavated soil had been tipped and found pieces of grey, black, and buff wheel-turned ware, some of which had bead rims and others had cordons. In addition, I picked up fragments of Samian and New Forest ware, coarse hand-made pottery, and teeth of horse and sheep. Here we have undoubted Roman influence, but this pottery is of a much later date than the finds at the currency-bar site.

The objects discovered in the pit are similar to those found in

some of the pit-dwellings of Wilts. The pottery seems to belong to the early La Tène period, and the evidence suggests that the pit and its contents belong to the Early Iron Age, and that the currency-bars were the property of its owner. There were several pieces of daub found at different levels in the pit, from which we may conclude that it was probably roofed with timber, covered by wattle and daub. The earth which was placed under the eaves on the rim of the pit to keep out wind and rain would provide a good hiding-place for the valuable currency-bars in case of a sudden attack on the village, of which the pit formed a part.

The locality appears to be one which would well repay further systematic investigation, but it is a task too great for individual effort and I have no fund at my disposal to open up the site by hired labour.

The currency-bars and the other specimens will be permanently exhibited in the Winchester Museum.

DISCUSSION

MR. REGINALD SMITH recognized three sorts of pottery among the finds, the usual paste of the Early Iron Age being soft and brown with a soapy surface. There was also a thick and hard ware, brick-red in colour; and a large fragment almost black and particularly hard with a plain square lip. Those were presumably contemporary with the currency-bars which Caesar found in use at the time of his invasion. It was satisfactory to find a site uncontaminated by Roman relics; and the four currency-bars from Winchester in the British Museum, of the same denomination, might have come from Worthy Down. The loom-weight had been of the usual triangular form with the angles pierced, a type also found in Holland and Belgium.

MR. BUSHE-FOX contended that some of the pottery resembled the earliest Hengistbury ware, of La Tène I period; and Mrs. Cunnington had found more of it at All Cannings Cross Farm, Wilts.,¹ in association with a brooch of La Tène I type. Thus the Winchester pit-dwelling had been in use for a long time: several layers were noticed in the filling, and he inquired at what level the pottery occurred.

MR. HOOLEY replied that the currency-bars were on the rim of the pit and the pottery occurred at all depths, so there was not necessarily any connexion between them.

THE PRESIDENT said Mr. Dale was one of the most constant and industrious of the Society's local secretaries, and had most usefully introduced to the meeting the work done by Mr. Heywood Sumner and Mr. Hooley. The former was not only an indefatigable searcher

¹ *Wilts. Arch. Mag.*, xxxvii, 526.

but had artistic powers which enabled him to illustrate with peculiar charm the accounts of his own discoveries. Till recent years Roman kilns had been practically unknown in Britain, and many that had come to light stood to Mr. Sumner's credit. The date of Mr. Hooley's pit-dwelling was uncertain, but some future discovery might show how long before Caesar currency-bars were in use. Meanwhile the curator at Winchester would continue the arrangement and improvement of his museum, which under his charge had become a credit to the county. To Mr. Dale was due the presentation of an interesting report on archæological progress in Hants.

Note on a Bronze Polycandelon found in Spain

By W. L. HILDBURGH, F.S.A.

[Read 17th March 1921]

[The following 'Note' was already in type when I found that a new book, *Iglesias Mozárabes, Arte Español de los Siglos IX á XI*, by Manuel Gómez-Moreno (son of the author of the paper 'Medina Elvira', referred to frequently below), contained (fig. 214, p. 391) a tracing of the outlines of the present *polycandelon* and a discussion (pp. 389 *seqq.*) of its possible relationship to the *polycandela* in the Granada Museum. *Iglesias Mozárabes*, although dated 'Madrid, 1919', was not actually published until the end of the following year; and only in the early months of 1921 did a few copies reach England. A fortunate delay in the printing of the present 'Note' has given me the opportunity of directing attention to the book, and to the excellent photographs of several of the Granada *polycandela* it contains; and, in a few instances, of supplementing my own conclusions by quotations from it.]

THE bronze object shown in fig. 1 was, according to the man from whom I got it in 1915, at Granada, found in or close to the ruins supposed to be those of Medina Elvira, near the village of Atarfe. He stated at that time that the person from whom he had bought it claimed to have found it there, a few weeks before my visit; and in 1919 he made a similar statement. This history, in spite of the seeming lack of motive for its falsification, appears at least in certain details to be incorrect, for the author of *Iglesias Mozárabes* speaks (p. 390) of the piece having appeared for sale at Granada in 1910¹ and 1914, and suggests the possibility that it had been brought there, to be sold, from some distant point, although he adds that the form of its horseshoe-shaped little arches and the heart-shaped terminals favour the idea of an Andalusian origin. Granada, as a centre of tourist traffic, tends indeed to attract to itself antiquities (real or false) not only from other parts of Spain but even from abroad (e.g. Morocco and Italy); but that an object so rare, comparatively, as the present

¹ This may possibly have given rise to my informant's statement that at least one other *polycandelon* not in the Museum had been found at Granada.

one should, if coming from abroad, find its way there in preference to some more important centre, seems to me unlikely although not impossible.

The object is the platform of a *polycandelon*,¹ a hanging lamp-carrier, in a single casting of very open construction, whose diameter (measured from the tip of one ray to the outermost point

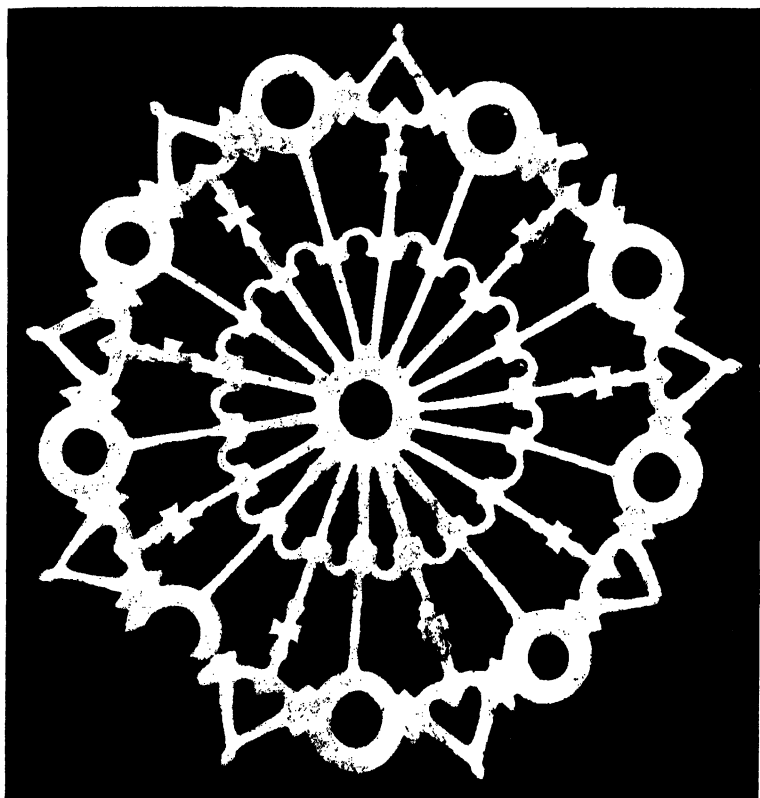


FIG. 1.

of the little circle at the end of the opposite ray), varies from about 12½ in. to about 13 in., and whose average thickness is about $\frac{3}{8}$ in. Its metal is light golden in colour, and is covered with a thin layer of lightish green patina. From a small circle at its centre radiate eighteen slender bars terminating alternately in an openwork figure having somewhat the outline of a heart and in an openwork

¹ For general information concerning *polycandela* and the manner of their use, see Lethaby and Swainson's *The Church of Sancta Sophia*, London and New York, 1894, pp. 111 *seqq.*

circle, the alternating hearts and circles being joined into a continuous rim by means of short radial double-pointed bars to which each heart or circle is tangent on either side. A little less than half-way from the centre the bars are joined in pairs by a series of arcs (of about 240°) of very small circles, and between the heart-shaped head of each alternate bar and the large rosette formed by the little arcs is a small cross. Upon the crosses of three of the bars, equidistant from each other, are small loops intended to serve for the attachment of the means of suspension.

The present *polycandelon* is not the only one which has (actually or by repute) been found in the vicinity of Granada. In addition to one or more others which, according to an informant at Granada, have been found in the neighbourhood but concerning which he could give no further information, the remains of at least six were found in 1874, together with many other things, on a site known traditionally as the 'Secano [= dry, unirrigated land] de la Mezquita [= of the Mosque]'. These six have been briefly catalogued in a long paper by D. Manuel Gómez-Moreno, entitled 'Medina Elvira', in which an account is given of the site on which they were found; and the other objects found with them and on other adjacent sites are listed.

When, in the early months of 1874, the Secano de la Mezquita was used as a source of ready-hewn blocks of stone for employment in the building of a house in the neighbouring village of Atarfe, about a hundredweight (to be exact, 104 *libras*) of pieces of bronze was discovered there, together with a number of other things, including fragments of glass which were found near the remains of the *polycandela* and suggest that oil-vessels of that material were used with those bronze platforms.² The condition of the various objects discovered showed that the Secano must have been the scene of a violent conflagration, signs of which were also to be found in all the other parts of the ruined city.³ The Secano itself seems to have been the site of the finest building of which traces have been preserved at Elvira, a building which appears unquestionably to have been the mosque of the Arab city.⁴ The archaeological evidence seems to indicate that that city had previously been the Visigothic town of Castalá, which became

¹ Originally published at Granada, in 1888, and illustrated by small sketches of the various objects, including the *polycandela*, found. It was subsequently reprinted, without illustrations, in the author's *Cosas Granadinas de Arte y Arqueología* (Granada, n.d.), to the paging of which the references throughout the present 'Note' are to be referred.

² 'Medina Elvira', pp. 169, 170.

³ *Ibid.*, p. 171.

⁴ *Ibid.*, pp. 186, 187.

the Medina Elvira, the capital of the district of that name, and that its destruction took place during the first third of the eleventh century, in the course of the civil wars, when its inhabitants abandoned it and took refuge at Granada. The objects of all kinds, dating from the period of the Arab occupation, which were found in the excavations, 'correspond to the debased Roman [*Románico*] style, and to the style called Byzantine, having nothing which shows that Arabic art had yet assumed a form of its own, wherefore it must be agreed that these objects belong to the period comprised between the eighth and the eleventh centuries'.¹ Concerning these objects the Hurtados, too, say 'they correspond to the primitive Arabic taste, when the conquerors of our soil could do nothing more than imitate the arts of the conquered population'.²

The pieces composing the six *polycandela* in the Granada Museum were discovered among the hundredweight of bronze mentioned above. As some of the *polycandela* were in a very fragmentary condition, they were, for their better preservation and for purposes of exhibition, mounted upon circular boards on which—a matter of no great difficulty, as the designs are symmetrical about the centre—lines were painted representing missing parts of the platforms. Four of the platforms (of which three have been mounted on boards) are shown in figs. 2, 3, 4, and 5, representing respectively nos. 547, 549, 550, and 548 of the Museum's cataloguing.³ The fourth (fig. 5) is comparatively complete, but unfortunately much of its upper surface is hidden by the agglutinated mass of chains by means of which it was suspended; on its under side may be seen carbonized remains of the grass (*esparto*) mats which must have been on the pavement of the building in the Secano. The fifth platform, not shown here, is in rather fragmentary condition. The sixth (no. 552; G.-M. no. 41), in an almost complete state, was, at the time I made my negatives, so exhibited that unfortunately it was impracticable for me to photograph it satisfactorily; a good view of it, hanging, may be seen in *Iglesias Mozárabes*, pl. cxlix.⁴ Suspended, with its parts in their proper relation to each other, its disc was hung, by means of the three loops on the upper surface, from three chains composed of small links and attached to a bronze joint which itself hung by a short piece of chain from a bronze sphere hung from the ceiling. In fig. 6 may be seen several similar

¹ 'Medina Elvira', p. 185.

² J. and M. Oliver Hurtado, *Granada y sus Monumentos*, Malaga, 1875, p. 432.

³ They correspond to Gómez-Moreno's nos. 44, 42, 45, and 46, on pp. 197, 198.

⁴ Pl. cl and fig. 215 show three others of the discs.

bronze joints, and a bronze sphere, which belonged to the suspensory systems of the other *polycandela*.¹ A number of the remaining bronze fragments found with the *polycandela* seem to have belonged to other suspended objects, perhaps lamps of another kind, or, judging from a thin arched plate, ornaments like crowns (*diademas*).²

In the elder Señor Gómez-Moreno's opinion, the *polycandela* in the Granada Museum seem, according to the evidence available, to have been for mosque-lamps; and, so far as I am able to judge, there is nothing in their style or in the details of their ornamentation to make us dissent from that opinion. His son suggests (*Iglesias Mozárabes*, p. 391) that the relatively advanced characteristics of two of them indicate workmanship of the definitely Arab period, and points out that the other four are, although lacking distinguishing crosses, so similar in design to Christian *polycandela* that we might well believe that they had been taken from early churches for use in the mosque, just as Moslem things were in later times adapted for use in Spanish churches. He says that these four, if they are not of Mozarabic workmanship, clearly copy Mozarabic models whose types became established in the Moslem art of the district. Of these *polycandela* Riaño says,³ they 'are artistic in their general lines, but the workmanship is indifferent, and the ornamentation heavy and coarse', and this may, I think, well lead us to believe that they were made during the Arab occupation (which terminated at an early date on the site where they were found), rather than during the Visigothic period. Compared with them, the present platform is light, not only in respect to its design, but also in the quantity of metal used in its construction; furthermore, the series of nine crosses in its ornamentation indicates that it was made for Christian use, and clearly not to serve in a mosque. We may therefore, I think, reasonably suppose that it was made at a period anterior to that of the Arab domination; that is, at some date before the eighth century.

The *polycandela* above cited are the only examples found in Spain of which I have heard. There are, however, in museums outside of Spain a number of other *polycandela*, from various localities, of which descriptions have been published. Of these, the one which seems most nearly to correspond to the present example is the one in the Cairo Museum of Egyptian Antiquities, figured (fig. 335) and described (pp. 297, 298) by J. Strzygowski in the

¹ *Iglesias Mozárabes*, p. 391, calls attention to the similarity between some of these suspensory members and members of the Coptic *polycandelon* at Cairo or the Calabrian *polycandelon*, both referred to *infra*.

² 'Medina Elvira', p. 170.

³ J. F. Riaño, *The Industrial Arts in Spain*, Lond., 1890, p. 69.

section *Koptische Kunst* (Vienna, 1904) of the *Cat. gén. des Antiquités égyptiennes du Musée du Caire*. This object (Cat. no. 9156; it is the only one of the kind catalogued), of which ten fragments

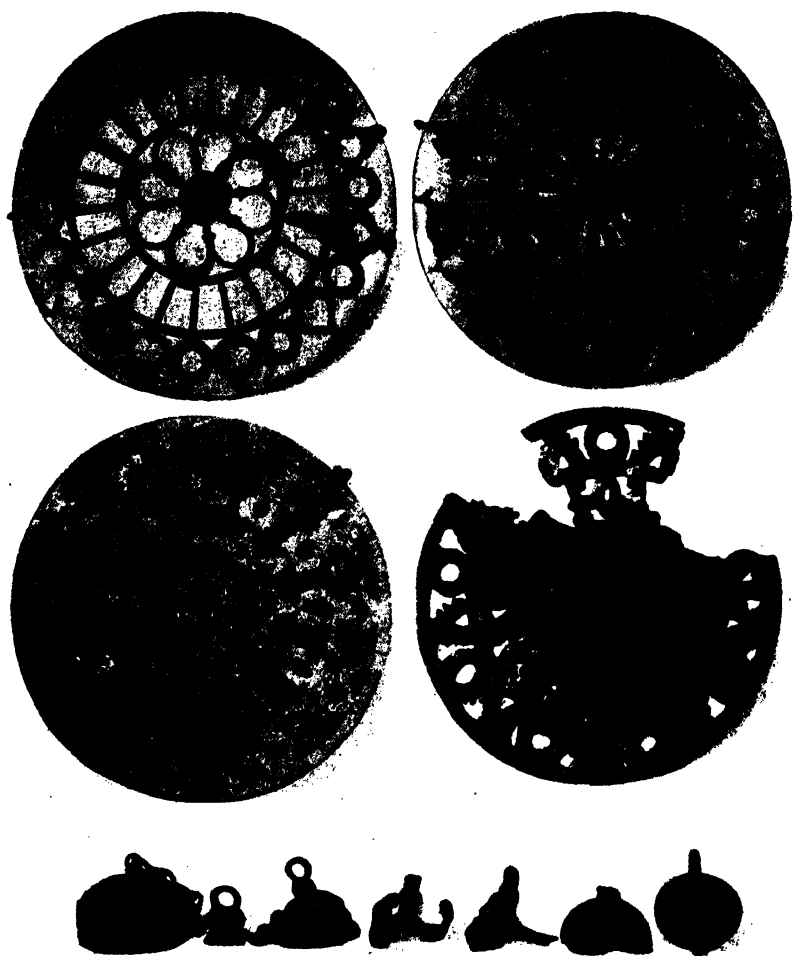


FIG. 2.
FIG. 4.

FIG. 3.
FIG. 5.

FIG. 6

remain, had in its outer portion twenty-four radial bars terminating alternately in a small circle and in a trident-like figure very similar to what the heart-shaped pieces of the present specimen would present if their tips were removed; and the bars with the

trident-like ends are broken by small crosses placed almost exactly as are the crosses of the present specimen. Close as are these similarities, it is nevertheless obvious that the principal part of the central portion, now missing, had a form quite different from that of the present example. Its outer diameter, as given by Strzygowski, is 46–47 cms. (approx. $18\frac{1}{2}$ in.), and it is attributed by him to the sixth–eighth centuries.

Of similar character is another *polycandelon*, in the British Museum,¹ the design of whose disc is composed of sixteen bars radiating from the centre and terminating each in a small circle, with a small cross resting on one small rounded arch and supporting two others between each pair of bars. The disc, whose diameter is $17\frac{3}{4}$ in., is hung by chains meeting at a hook. Rohault de Fleury figures² another *polycandelon*, of similar nature, found in a catacomb in Calabria and attributed to the fifth century, whose platform consists of a small central circle from which radiate twelve bars terminating alternately in a circle (of the same size as the central one) and in a pair of nearly complete smaller circles; the six bars ending in the pairs of circles are each broken midway by a little cross, thus closely resembling the trident-ended bars of the Cairo example and the heart-ended bars of the present one, to which they seem obviously to be in some way related. At the centre of the platform, whose diameter is 23 cms. (9 in.), is shown a bronze lamp whose base just fits the central opening.

The Kaiser-Friedrich Museum, at Berlin, has four *polycandela*, from various places in the Nearer East, which are believed to date from the sixth or the seventh century. They are all smaller than the present example, and their discs are like circular plates pierced with a series of openings rather than like systems of bars grouped with other small elements. For comparison here, the most interesting of them is no. 1007,³ from Smyrna, whose outer edge is composed of six arcs and six salient angles in alternation, and much resembles the outer edge of the present specimen with its nine arcs and nine salients; it is not quite 10 in. in diameter.

The present example lacks, unfortunately, the chains or rods by which it was suspended when in use, and we are therefore unable to utilize its system of suspension as a criterion in judging of its place of origin. The system used for the discs now at the

¹ Cf. O. M. Dalton, *Cat. Early Christian Antiquities . . . Brit. Mus.*, Lond., 1901, no. 529, pl. xxvi and p. 104; or *Guide to . . . Early Christian . . . Antiquities*, 1903, pp. 70, 71.

² *La Messe*, vol. vi (1888), pl. cdxxxix; description on pp. 12, 13.

³ See Oskar Wulff's *Altchristliche . . . Bildwerke*, Königliche Museen zu Berlin, part i, Berlin, 1909.

Granada Museum has been described above (p. 331), but as those discs appear to me to be of a later period than the one here, we cannot, I think, apply it as evidence defining the system used for this one. Of the other *polycandela* I have cited, some have a system embodying ordinary chains, some one formed of a series of rods.

The resemblances of certain of the details of the present example to details of the *polycandelon* at Cairo, of that at the British Museum, and of the one shown by Rohault de Fleury, suggest strongly an Eastern origin for it, and that it was imported into Spain—perhaps from or through Byzantium, with which the Visigothic kings were in close touch, and from which came, as well, many of the ornamental objects and decorative motives used during the earlier centuries of the Arab occupation of Spain. On the other hand, since the Romans in Spain were accomplished workers in bronze, and the Visigoths continued—as is testified by various articles of an ecclesiastical or of a personal character which have come down to us—to be workers in metals,¹ although less skilful, it seems to me possible that we may have in this specimen an example of late Visigothic metal-work, based on the *polycandela* used at about the same period in the Nearer East. But whether the disc be of Spanish or of Eastern manufacture, and especially if it were found in the circumstances described to me, it appears when viewed in association with the others found near Granada (some at least of which closely resemble it) to have a special interest as a piece of evidence concerned with the early history of Hispano-Arabic metal-work.

Addendum

The bronze fragment shown in fig. 7, while not directly connected with the above *polycandela*, is interesting from the circumstance that it appears to have been made during the same period as the *polycandela* in the Granada Museum. When I got it, at Madrid, I was unable to learn anything whatever concerning its previous history. However, its very close resemblance in the general character of its execution and in certain of its details—the disc (with its projections round the edge), the part of the stem (including the swelling portions) remaining, the figure of the bird, and the openwork of the frame—to a bronze object of similar dimensions, found with the Granada *polycandela* and now kept with them in the Museum, seems to indicate clearly the period

¹ Cf. J. Amador de los Rios' *El Arte Latino-Bizantino en España*, Madrid, 1861.

to which it should be assigned, if not actually the locality or the site. The object referred to, which has from its form been said to resemble a temple, has been figured by Leonard Williams in *Arts and Crafts of Older Spain*.¹ A similar bronze object, having a square base upon which rest nine long slender columns supporting a square piece whose upper part the lower part of the present fragment closely resembles, is in the Archaeological Museum at Madrid (no. 825 of its section); it now lacks, however, every-

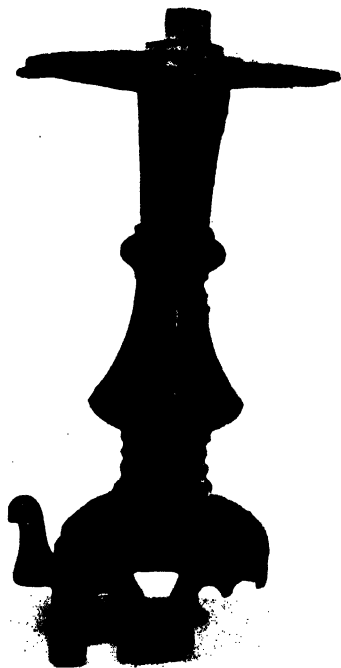


FIG. 7.

thing above the junction of the stem with the domed roof of the 'temple'. Both they and the present object have been, I think, lamp-stands similar in nature to those, from the Near East, figured by Wulff (*op. cit.*, pl. 1).² The surface of the present fragment is in considerable part covered with a crude and coarsely-graven conventional ornamentation. So few examples of Hispano-Arabic bronze-work of the period in question seem to have survived that the present object, although fragmentary, has appeared worth recording.

¹ Lond., 1907, vol. i, pl. xxxii. Cf. Riaño, *op. cit.*, p. 69; and 'Medina Elvira', p. 199 (a sketch of it is given in the original pamphlet).

² Cf. also British Museum example, no. 496 figured on p. 69 of *Guide to ... Early Christian ... Antiquities*.

DISCUSSION

Mr. DALTON thought the date of the *polycandelon* exhibited was probably sixth century. Whether made in the east or west, the bronze was evidently copied from an Early Christian or Byzantine model. The illumination, when *polycandela* were used, was effected by means of glass oil-lamps which fitted into the circular holes on the margin. Early churches had enormous quantities of such lights suspended from the roof, and in some churches they had been compared with the stars of the sky. Some of the ancient *polycandela* must have been of great size and weight, but only small ones had reached us, many larger examples having, no doubt, been broken up for the metal.

The PRESIDENT said the exhibit was an uncommon one, and he was not familiar with any like it from Spain. He was inclined to regard Cairo as the centre of manufacture, as some Coptic remains in the museum there were very similar. The light of *polycandela* came from floating wicks in half-filled tumblers of glass with spreading lip ; and some of the light had therefore to pass through the oil, for which reason a large number of these lamps was needed.

Notes

Retirement of Sir Hercules Read.—On 31st July Sir Hercules Read, P.S.A., retired from the British Museum after forty years' service, during twenty-five of which he had been Keeper of British and Medieval Antiquities and Ethnography. To mark the event a volume was presented to him by a body of subscribers, containing illustrations in colour and collotype with short descriptions of some of the most important objects acquired by his department during his Keepership. This volume was presented to him by the Archbishop of Canterbury, one of the principal Trustees, at a dinner held at Princes' Restaurant on 28th June which was attended by a large number of his colleagues and friends.

British Museum Appointments.—On the retirement of Sir Hercules Read, his department in the British Museum has been divided into two. Mr. O. M. Dalton, F.S.A., succeeds to the Keepership of British and Medieval Antiquities, but Ceramics and Ethnography now constitute a separate department under Mr. R. L. Hobson. The prehistoric section remains with British and Medieval Antiquities, while the oriental collections are transferred to the new department.

Remarkable stone implements.—The rostro-carinate controversy is revived by Sir Ray Lankester's recent paper in the *Proceedings* of the Royal Society (B. vol. 92, 1921), on a remarkable flint implement from Selsey Bill. Full justice is done to its features in three full-size views drawn by Miss Gertrude Woodward, the flint in question measuring about 8 in. by 5 in. It was found on the shore in 1911 when the shingle was suddenly washed away, and is published as good evidence of the existence and human origin of the type, though the actual *carina* is in this case wanting. Mention is incidentally made of a palaeolith measuring $12\frac{1}{8}$ in. in length and weighing 6 lb. 2 oz. from the gravel at Taplow. It has been presented to the Natural History Museum by Mr. I. L. Treacher, F.G.S., and a coloured cast is exhibited at Bloomsbury, where the Selsey specimen has also been sent as a gift by Sir Ray Lankester.

Exhibitions of Egyptian antiquities.—Three exhibitions of Egyptian antiquities were to be seen in London during July. A number of masterpieces was on loan at the Burlington Fine Arts Club, and an illustrated catalogue by Mr. Percy Newberry, O.B.E., and Dr. H. R. Hall, F.S.A., is to be published. In the Society's rooms were displayed the specimens discovered at Tell el-Amarna by Professor Eric Peet and Mr. A. G. K. Hayter, F.S.A., for the Egypt Exploration Society; and at University College, Professor Petrie showed the results of two years' digging at Lahun and Sedment on behalf of the British School of Archaeology in Egypt.

Late Celtic Urn Field at Swarling, Kent.—An Early British burial-ground that may prove a rival to Aylesford has been discovered at Swarling, Kent, a few miles south of Canterbury, and by the courtesy of the landlord, Mr. Arthur Collard, has been partly excavated by Mr. Leonard Woolley on behalf of the Society's Research Committee. The cremated bones are contained in pottery urns developed from the pedestal type, and so far no two vessels of the same form have been discovered. The brooches of bronze and iron indicate that the cemetery was in use about 50 B.C. to A.D. 50, but much more evidence is expected when the excavation is resumed after the harvest. Besides the burial groups of pottery, remains of a bloomery were discovered with a large amount of slag and traces of enamelling, evidently of the same period. The discovery confirms the view that the Aylesford culture was characteristic of the inhabitants of Kent whom Caesar marked out as the most civilized of the Britons.

Earthworks near Bournemouth.—A survey of the earthworks in the Bournemouth district, printed by the local Natural History Society, is from the pen of our Fellow Mr. Heywood Sumner, and in his best style. It shows what can be achieved by individual effort; and in default of county or other regional surveys, his maps and sections will serve as a model for field-workers elsewhere. Mr. Sumner has already dealt with the earthworks of Cranborne Chase and the New Forest, and Mr. W. G. Wallace adds an account of others in the Bournemouth district south of the Stour, including those on Hengistbury Head and eight others hitherto unrecorded. There seem to be no local long barrows or other neolithic monuments, but Mr. Sumner has little hesitation in attributing various remains to the Bronze and Early Iron Ages, or to Roman and medieval times.

Excavations at Wood Eaton.—In the autumn of 1920 at the suggestion of Sir Arthur Evans and with the kind permission of the owner of the property, Major Weyland, a party of undergraduates and a few senior members of the University of Oxford began excavations at Wood Eaton, in the field numbered two on Miss Taylor's plan.¹ The work was carried on till the end of the Hilary Term. The whole site is covered with small broken sherds, which are mixed up with the soil, and appear at all depths till undisturbed clay is reached. Trial pits were dug at wide intervals over the field, and just below the surface a layer of loose stones, possibly the stones from buildings, was found. Beneath these stones, in the centre of the field, a quantity of painted plaster was excavated. This lay for the most part with the paint downwards. The background of the design was a dark red with a border ornamented with a simple conventional flower pattern in green and cream. In some places above and almost everywhere below the fragments of plaster a layer from 2½ in. to 4 in. thick of burnt material was found. Beneath this layer and directly contiguous to it, with marks of fire upon the stones, traces of walls were found, too few, however, to trace any definite plan. A few Antonine and Constantinian coins, one cross-bow brooch, two early Samian stamps, and

¹ M. V. Taylor, 'Wood Eaton', *Journ. Roman Studies*, 1917, p. 101.

much rough pottery were found in the humus. The general impression gained by the excavators was that the whole site had been destroyed by fire, once and probably twice, in ancient times and ruined beyond hope of reconstruction then or possibly at a later date. As it seemed unlikely that further excavations would add appreciably to our knowledge of the site, work was reluctantly abandoned at the end of the Hilary Term. A more complete account of the finds will be published shortly in the *Journal of Roman Studies*.¹

Discovery of a Roman coffin at Lower Slaughter, Gloucestershire.—

In April of this year a stone coffin was found on the slope of the hill at Lower Slaughter, quite close to Buckle Street. Mr. Dudley Buxton, who examined the find on behalf of the Society, reports that it is made of a good oolitic stone which seems to differ in texture from that found locally. The coffin, which was rectangular, narrowing at the foot, appeared to have been dressed inside with an axe or mattock. It measured 70 in. in length, 12 in. in breadth at the foot, and $13\frac{1}{2}$ in. at the head, and had a maximum depth of 12 in., but at the foot was $8\frac{1}{4}$ in. The covering slab was roughly dressed with a chisel and measured 88 in. in length, 19 in. in breadth at the foot, and 29 in. at the head. The coffin was in the earth and the outside could not be examined, but on the part exposed no inscription was visible. It was oriented with the feet a little to the west of south. The slab had been fixed with a little dab of mortar. The contained skeleton was very fragmentary but was certainly that of an adult male in the prime of life. The stature was apparently about 5ft. $3\frac{1}{2}$ in. There were a few traces of iron on the bones but not enough to suggest anything definite. At the feet of the skeleton were some fragments of leather indurated by the rust of small hobnails passing through them. Most are too small to admit of any reconstruction, but a few pieces give clear indications of structure and probable position. The sole, as shown by nails of which the inner riveted end is preserved, was about $\frac{5}{8}$ in. thick, and portions from the side of the sole show the leather to have been cut with a bevelled edge. These same portions also indicate a very straight line on the inner side of the foot. The nails, apparently of a small hobnail variety, are set at intervals of $\frac{1}{2}$ in. Other fragments belong to the curved outline of the toe, or more probably of the heel. In these, remains of a second parallel row of nails are preserved. Two pieces show a triple setting of nails closely adjoining the outer fringe of nails at the side of the sole. Thus far there is nothing remarkable in the arrangement of the nails, but there are indications of a more complicated setting. Two fragments at least are semicircular in shape with a chord of about $1\frac{3}{8}$ in. between the widest set nails. This agrees exactly with the diameter of the 'shoe-latchet' setting on the sole of a shoe from the Poultry, London (*Arch. Journ.* 32, 329 fig.), and, though it is not possible to reconstruct it with certainty, some similar arrangement may have been adopted on the Lower Slaughter shoe. For other patterned settings see *Proc. Soc. Ant. Scot.* xl, 505, fig. 35 from Barrhill.

There is much that is reminiscent of what is known of the system of nailing Roman 'caligae', and these remains support the Roman date of the burial indicated by the stone coffin and the skeletal material.

The Lazar House, Norwich.—This building has recently been presented to the city by Sir Eustace Gurney, after a thorough restoration. The Lazar house or Magdalen chapel was built by Bishop Herbert de Losinga, the founder of the cathedral, on ground belonging to the cathedral church. Of the present building the west and south doorways are most likely Bishop Herbert's work, although it is possible that they are not now in their original positions. That on the south has recently been rebuilt, and as there is a Norman buttress in the north, the walls are probably of that period.

In the eighteenth century the building was used as a barn. In 1902 Mr. Walter Rye saved it from being pulled down, and in 1906 it was purchased by Sir Eustace Gurney, who has now in a most public spirited manner handed it over to the city corporation.

Find of Treasure Trove at Abbeyland, Navan, co. Meath.—Mr. E. C. R. Armstrong, F.S.A., Local Secretary for Ireland, communicates the following: On Friday, 17th June, 1921, a labourer, when deepening a drain at Abbeyland, near Navan, co. Meath, found a crock containing a large number of silver coins. Of these 474 and eleven fragments of a black-glaze vessel, probably of late seventeenth-century date, have been forwarded through various channels to the Royal Irish Academy. The fragments of the crock are not sufficiently large to enable its shape to be determined. The coins consisted of 2 shillings, Edward VI, mint marks, ton, and y; 2 sixpences, Edward VI, Tower, and York Mints; 2 English shillings and 2 English sixpences, Philip and Mary; 52 English shillings, Elizabeth, marks include, martlet, cross-crosslet, bell, escallop, hand, woolpack, 1 and 2; 192 English sixpences, Elizabeth, marks include, arrow, rose, lion, coronet, castle, ermine, cross, sword, bell, A, escallop, hand, ton, woolpack, key, 1, star; 44 English shillings, James I, marks include, thistle, lis, rose, escallop, coronet, bell, trefoil, ton; 4 Irish shillings, James I, 1, first, 3, second coinage; 23 English sixpences, James I, marks include, thistle, lis, rose, escallop, coronet; 3 thistle merks of James VI, 2 dated 1601, 1 dated 1602; 28 English half-crowns of Charles I ordinary type, marks include, crown, triangle, star, triangle in circle, cyc, sun, rose; 1 English half-crown, Charles I, declaration type, dated 1645, A below date; 79 English shillings of Charles I, marks include, lis, anchor, portcullis, bell, crown, ton, triangle, star, triangle in circle, (P), (R); 18 English sixpences, Charles I, marks include, rose, bell, ton, triangle in circle; 8 Irish coins, Charles I, i. e. Inchiquin money, 2 half-crowns, first, and 1 third issue; Ormonde money, 2 half-crowns and 3 sixpences; 8 Spanish 'cob' dollars, and 4 half-dollars; a much-worn coin that appears to be a sixpence of Elizabeth, struck on both sides with the Royal Arms (82 can be seen above the shield on one side); an indistinguishable coin.

The fragments of the vessel and a small selection of the coins have been acquired as treasure trove by the Royal Irish Academy. They will be exhibited in the National Museum, Dublin.

St. Stephen's, Walbrook.—The abnormal heat of July last produced many curious results, and amongst them it was found that the lead on

the dome of St. Stephen's Church, Walbrook, had crept and fallen to an extent of over eighteen inches. This church is the masterpiece of Wren, and the model for St. Paul's dome, and its beauties are well known to all in the City who pass the Mansion House. The dome has been swathed in tarpaulin to keep out the weather, as otherwise the first heavy shower would have brought down the enrichments of its interior.

The House of Robert de Parys.—Mr. C. L. Kingsford writes as follows: In my paper on *Paris Garden and the Bear-Baiting* in the last volume of *Archæologia* (lxx, 157), I pointed out that though I had not found any other reference to the house of Robert de Parys it was natural to suppose that he resided in Queenhithe Ward. This conjecture I can now confirm. William atte Stokes, *alias* Essex, in his will made in 1449, refers to his tenement in the parish of St. Michael, Queenhithe, lying between the tenement of William Wynter, cowper, on the west, and the tenement. 'quondam Roberti de Parys ex parte oriente, et extendit se a vico Regio versus Boream usque ad aliam viam Regiam ibidem versus Austrum'. From this it seems probable that the dwelling-house of Robert de Parys, and therefore also the house for the butchers, was on the south side of Thames Street, a little to the east of Broken Wharf, and probably between that lane and Timberhithe. The reference to the will of William atte Stokes is *Commissary of London*, Prowet, f. 228.

Archæology in Spain.—Mr. Horace Sandars communicates the following: Progress in archæological research in Spain and the publication of the unexampled results attained have been so rapid and far reaching during the past few years that it is practically impossible to take even a cursory survey of the results attained in the short space allotted to a note in this journal. The field covered by recent investigations is a very wide one, but I do not propose, for the present, to carry my remarks thereon beyond the time of the Roman occupation of the Peninsula, and if a distinction could be made and greater importance attached to one subject rather than another, I suggest that the discoveries bearing upon Iberian (in the sense of pre-Roman) culture and development in art and industries in their various phases take precedence over others. I do not propose to touch upon the literature relating to such subjects, which has been prolific and of a high order, except by way of reference, but I feel that I cannot but call special attention to a publication which appeared in Barcelona in 1920. It consists of a translation into Spanish by Dr. Pedro Bosch Gimpera (1) of an article on Spain by Dr. Adolfo Schulten, which he wrote for a German Encyclopædia, but to which the former has added an Appendix, entitled *La Arqueología Preromana Hispanica*, which is by far the most complete and well-arranged account of archæological progress in Spain which has hitherto appeared. The bibliography at the end of each section treated is full and invaluable.

The admirable work initiated by Abbé H. Breuil, and carried on by D. Juan Cabré, D. Hernandez Pacheco, Professor Obermaier and others, in connexion with the rock-paintings of the Peninsula has pro-

¹ The figures in brackets refer to the bibliography at the end of this note.

duced results far exceeding their most sanguine expectations. There is hardly a district in Iberia which has not been investigated, and yet new and surprising discoveries are made every year. The paintings of the palaeolithic period have now been traced from the north-west of the Peninsula to the east or Mediterranean coast in the Provinces of Ternel, Valencia, Albacete, and others, and in nearly all cases the drawings and attitudes of the animals with which man was then acquainted are admirably true to form and conception. The fauna is varied, and among the rarer animals depicted we find the elephant and the bear (not the cave-bear) in the north-west and the rhinoceros and an elk in the east. There is, however, one marked distinction between the rock-paintings in the north-west and those of the east of Spain. In the former the representations of the human form are rare and primitive in the extreme (2), whereas they are frequent and surprisingly realistic in the latter. Figures of both men and women are commonly to be seen (5), combined with representations of animals, and taking part, in the case of the men, in the chase (6) or in desperate combats with other huntsmen or tribes.

The incidents are too numerous to mention here, but there is one to which reference might be made (7) as it shows both method and organization in their hunting expeditions. It represents the driving of a herd of deer towards a group of huntsmen who, aligned in suitable positions, are shooting at them with bow and arrow. Speaking generally, the women are clothed while the men are nude. The sense of movement, in many instances of rapid movement, which the palaeolithic artists were able to convey to the men and beasts they drew is truly surprising.

Among the animals represented on the rocks at Minateda, in the Province of Albacete, which lies to the west of Valencia and well down in the south-east of Spain, is the reindeer, a herd of which can distinctly be seen [(3) fig. 30]. This representation must, however, be due to a reminiscence on the part of the artist of what he had seen in the north-east of the Peninsula, or to a herd of the deer having actually been brought to Albacete, as there is no evidence of the reindeer having penetrated to any considerable distance south of the Pyrenees.

The transition, if one may use such an expression, in the rupestrian art from the palaeolithic to the neolithic periods (9) can be clearly traced (10), and the marked characteristics of the later period have been distinctly defined. They may generally be described as expressions of conventionalism or schematism. Many of the scenes with which the palaeolithic artist has made us familiar are repeated by the neolithic painter, although the fauna naturally differs. In the latter case, however, the animals are so crudely represented that their nature is often a matter of guess-work, while the human form, both male and female, becomes so schematized that it is finally represented merely by signs which do not appear to have any connexion whatever with the object depicted [(8) p. 239].

Abbé H. Breuil, whose enthusiastic researches have opened up so much new country in Spain, discovered many neolithic sites in the Sierra Morena and in other parts of the south of the Peninsula where

material evidence confirmed the opinion that the rock paintings belonged to that period; and he was followed by Sñr. Cabré who also did good work there in this connexion. The human form is, however, not always conventionalized, since Abbé Breuil discovered in the Sierra Morena [(3) pp. 240-241] a rock painting where the figures of both men and women are unmistakably defined, and where, for the first time, scenes in which domesticated animals play a part have been found, and where three horses, accompanied by a dog or cat, are being led by a cord or rope held by women.

In some instances the neolithic paintings were most elaborate and were executed in several different colours and probably at different periods. In the Cueva del Pajo de las Figuras, in the Province of Cadiz, for instance, the composition includes several hundred different subjects, such as human beings, stags and other animals, and a large number of different kinds of birds and their nests containing eggs, etc. (11). Abbé Breuil has published a list of the birds represented in this great painting [(3) p. 157]. They are mostly aquatic, such as the ibis, the swan, and the heron, but there are some land birds as well, such as the bustard and the partridge. As I write an exhibition is being held in Madrid of the rock paintings of different periods found in the Peninsula. They have been gathered together from all sources and reproduced in their natural colouring, and from them important and enlightening results may be expected.

Among the most interesting and important archaeological discoveries in the Iberian Peninsula of the past few years is that made by Mr. George Bonsor in the autumn of 1920 when he succeeded in tracing the western branch of the river Guadalquivir, all knowledge of which had long been lost. Mr. Bonsor has definitely succeeded in locating the site of the renowned Phoenician Emporium, the Tartessus-Gader of Avienus's *Ora Maritima*, the Tharshish of the Scriptures, and the 'island' which Strabo so accurately describes as formed by the two arms of the river Betis (known as the Tartessus in pre-Roman times), where they flowed into the sea to the west of the rock on which stood the lighthouse of Sevilinus Caepio, the modern Chipiona.

The site forms part of the well-known *marismas*, where the flamingoes breed, the 'wild camels' stray, and where that excellent sportsman the King of Spain takes part in, perhaps, the finest shooting on the continent of Europe.

I hope to continue this survey of Spanish archacology in a subsequent number.

- (1) *Hispania (Geografía, Etnología, Historia)*, traducción del Alemán por los Doctores Pedro Bosch Gimpera y Miguel Artigas Ferrando, con un apéndice sobre La Arqueología Prerromana Hispánica por el Doctor Pedro Bosch Gimpera. Barcelona: De Serra y Russell, Ronda Universidad, 6. 1920.
- (2) *Les Cavernes de la Région Cantabrique (Espagne)*, par H. Alcalde del Rio, l'Abbé Breuil et le R. Père Lorenzo Sierra. Monaco, 1911. Planches xlv et xlv.
- (3) *L'Anthropologie*, t. xxx, 1920. L'Abbé H. Breuil. Les Roches peintes de Minateda (Albacete), figs. 7 et 30.
- (4) *Les Cavernes de la Région Cantabrique* (as in 2). Bear, page 4 and plate iii.

- (5) *L'Anthropologie*, t. xx, p. 1; xxii, p. 641; xxiii, p. 529; xxvi, p. 313; xxix, p. 2. L'Abbé Breuil. Les Peintures rupestres de la Péninsule Ibérique.
- (6) *El Arte rupestre en España*, por Juan Cabré Aguiló. Junta para Ampliación de Estudios é Investigaciones científicas. Madrid, 1915.
- (7) *Las Pinturas rupestres del Barranco de Valltorta (Castellón)*, por Hugo Obermaier y Paul Wernert. Junta para Ampliación, &c. 1919.
- (8) Institut de Paléontologie humaine. *Rapports sur les travaux de l'Année 1913*, p. 233. *Travaux en Espagne*, par MM. Breuil et Obermaier. Masson et Cie, Paris.
- (9) *L'Anthropologie*, t. xxvi, 1915. vi. Les Abris peints du Mont Arabi près Yecla (Murcie), par l'Abbé H. Breuil et Miles Burkitt, p. 322 et fig. 3; p. 330 et fig. 4.
- (10) See (3), pp. 45 and 46; figs. 43 and 44.
- (11) *Avance al Estudio de las Pinturas prehistóricas del Extremo Sur de España (Laguna de la Janda)*, por Juan Cabré y Eduardo Hernandez-Pacheco. Junta para Ampliación de Estudios, &c. Madrid, 1914, pp. 10-27, and coloured plate.

Archaeology in Palestine.—Under the new Government, of which Sir Herbert Samuel is the head as British High Commissioner, a Department of Antiquities has been organized, an Archaeological Advisory Board constituted, and an Antiquities Ordinance promulgated. The Advisory Board represents the interests of the different communities and the societies of foreign countries engaged in archaeological pursuits in Palestine. The Antiquities Ordinance, based upon the terms of the mandate and the collective advice of specialists, is working well, and may be modified so far as desirable after experience, and to bring it into parallelism with the Antiquities Law of the French mandatory area in Syria. The historical sites of Palestine are being registered and a provisional schedule of these sites is now being published in the *Palestine Gazette*. A central museum is being organized under Mr. Phythian Adams. A hundred and twenty cases of antiquities have been recovered; these contain the finds made in excavations conducted in the years just preceding the War, and include the very important results of Dr. Mackenzie's work at Ain Sheins and some of Professor Macalister's at Gezer and elsewhere. Local museums are being organized for the care of objects of peculiarly local interest. The Citadel of Jerusalem will be devoted to the display of architectural pieces and larger sculptures. If found practicable, the Central Museum will eventually be housed within the Citadel.

Repairs have been effected to the Hippicus Tower, the Damascus Gate, and various parts of the medieval walls of Jerusalem under the direction of the Pro-Jerusalem Society which has undertaken the care of these monuments by arrangement. The 'Tower of the Forty Martyrs' or 'Crusaders' Tower' at Ramleh will be put into a state of repair in collaboration with the Public Works Department. This beautiful example of a Campanile was built under Mohammed El Nazir in 1318 in the Romanesque style of Southern France, suggesting the handiwork of French Crusaders. At Ain-Duk, near Jericho, the French Archaeological School (*École Biblique*) under Père Vincent and his colleagues have completed the clearance of the ancient

synagogue with its mosaic pavements; these it will be remembered have special features of decoration and also Hebrew inscriptions. The design of a Zodiac has been recovered. It was found indispensable for their protection to take up these pavements, a task which was entrusted to Mr. Mackay, Custodian of Antiquities in this Department. Steps have been taken to protect other ancient monuments at Jifna, Ramallah, Tiberias, and Caesarea.

At Askalon the Palestine Exploration Fund began exploring in the autumn and resumed excavations on a larger scale in the spring. The site proved to have a considerable depth of deposits since Hellenistic times; but important Graeco-Roman buildings are being uncovered (including apparently the *Puteus Pacis* of Antoninus Martyr) and the Philistine levels have been ascertained at the depth of about five to seven metres. A number of ceramic specimens have been collected and classified for comparative study. Further details of the results are to be found in the current quarterly statements of the Palestine Exploration Fund.

At Tiberias the Palestine Jewish Exploration Society made in 1920 successful soundings, disclosing remains clearly to be identified with the period of the Talmud. The same Society is now engaged in excavations under Dr. Slousch on the same site.

In Jerusalem, at Gethsemane, the Franciscan Custody has completed the excavation of a fourth-century church. The same organization is carrying out excavations near the second-century synagogue at Tell Hum (possibly Capernaum), the work being conducted by Père Orfali.

The University Museum of Philadelphia is preparing to begin work at Beisan under Dr. Fisher; and the sites of Megiddo and Samaria have been reserved for the Universities of Chicago and Harvard respectively.

The old-established École Biblique founded in 1890 by Père Legrange is now recognized by the French Académie as the French School of Archaeology in Palestine. The American School of Oriental Studies, of which Dr. Albright is now Director, has joined with the newly-established British School of Archaeology in the organization of a common library. These three institutions are working in close collaboration, and the buildings are at three minutes distance only.

A new feature of intellectual life in Palestine is the organization of the Palestine Oriental Society, which has now begun its second year and attracts to its meetings all those interested in archaeological and historical problems. The British School, which was founded in 1919 and began work in 1920, has made a gratifying start. Its active work is conceived under three main heads—Studies, Expeditions, and Records. The first comprises facilities and guidance for workers, particularly in the Library. The second, while taking advantage of current excavations, will tend rather to systematic exploration of special areas or groups of monuments, including caves and tombs. The third involves the development and upkeep of an organized register of all archaeological material of or relating to Palestine, to be classified in such a way as to be readily useful to students of the future. This work forms a central feature of the programme of the

School, in which all its workers and a growing number of volunteers elsewhere collaborate. Exchanges are being arranged with other working archaeological centres, and copies of the registers will ultimately be available in England, France, and America.

Reviews

Rogalands Kulturhistorie—Skrifter utgitt av Stavanger Museum: Rogalands Stenalder. Av HELGE GJESSING. Stavanger, 1920. 10½ × 7⅞. Pp. 181, with 62 plates and map.

That a provincial museum should publish an elaborate local survey of neolithic remains is a remarkable achievement, but still more surprising is it to find that these antiquities, collected in a district not so large as Norfolk and Suffolk, fall into their places in a scheme much in advance of anything outside Scandinavia, and continually confirmed or adjusted by means of fresh discoveries.

Rogaland, the district in question, has Stavanger for its centre and extends along the coast of south-west Norway approximately from Haugesund to Sogndal, including the narrow strip known as Jæderen. Geologists have made good use of the evidence for alternate risings and sinkings of the coast, and the main periods are already established, as certain types are shown to occur at levels that can be connected with the sea-shore at various periods. But the coast of Rogaland did not shift more than about 30 ft. vertically—much less than Kristiania fjord—and is too steep to give much assistance in the matter of chronology.

The earliest relics are bone harpoons with barbs along one side, and bone points with flint flakes set in a groove along the side, both types being dated elsewhere before the Shell-mound period, which is more fully represented by the kitchen-midden axe of flint and the greenstone celt of Nøstvet type. The population then depended on fishing and hunting, and came originally from the east, the Nøstvet centre being near Kristiania. From time to time new forms were introduced in the same direction, such as the pointed-butt and pointed oval section, the Vespestad and its derivative the Westland type of celt, also the practice of shaping greenstone by pecking or bruising. It is now held that the broad-butt celt marks a stage in the evolution of this pointed-butt into the thin-butt of the dolmen celt; and the presence of the last-named in Rogaland shows outside influence, this time exerted from the south or megalithic area, where agriculture had already started. The thick-butt celt from the passage-graves and the broad-edged celt of the Cist period follow naturally in their turn, completing the neolithic sequence of celts.

The author contests the view that the neolithic culture of Westland (approximately that part of Norway west of the meridian six deg. east of Greenwich) came from the north and was of Arctic-Baltic origin; nor in his opinion do Jæderen parallels to East Swedish and Finnish

types prove an invasion from that direction. Isolated objects might have come south by way of barter, but Trondhjem is his southern limit for the Arctic culture on the west coast. In that case the population of Rogaland remained intact throughout the Stone Age, but it was not till southern influence reached its maximum in the Cist period that the district became the richest in Norway. The plates of daggers, flint crescents, perforated axes, and other late forms bear witness to close contact with the higher civilization of Denmark.

Many of the specimens are photographically reproduced in two views, and thus alone can their features be appreciated by those unable to handle them. Many, however, are presented only in one view, and once again it must be remarked that while photographs are expensive to reproduce, sketches would not only be adequate, but would omit accidental and disturbing marks that the camera perversely emphasizes. In the present case it might be urged on the other hand that every object should be identifiable in an inventory, while diagrams are best in the description of types. The present volume amply serves both purposes, and will perhaps evoke the spirit of emulation.

REGINALD A. SMITH.

The Household Account Book of Sarah Fell of Swarthmoor Hall.

Edited by NORMAN PENNEY, F.S.A. Cambridge University Press, 1920. 9½ × 6¼. Pp. xxxii + 597. £2. 2s.

To students whose acquaintance with the Account Book of Sarah Fell has hitherto been limited to extracts, not always accurate, this volume, printed *verbatim et literatim* from the original, is very welcome. Apart from the light that is thrown upon George Fox in these accounts kept by his step-daughter, we have here a vivid picture of domestic and estate economy in a middle-class North Lancashire establishment towards the end of the seventeenth century. Records of this type are not uncommon: they may be found to-day in many north-country houses, though for the most part destroyed or scattered on the breaking up of an estate or change of ownership. In this instance, the original manuscript was recovered from a grocer's shop in Lancaster early in the last century, and is now safely housed in the Library of the Society of Friends at Bishopsgate.

Accounts, as a rule, are dull reading; but these have been admirably edited by Mr. Norman Penney who, with his skilled helpers, has made the dry bones live and clothed them with illuminative detail. The title selected for this volume belittles the scope of the accounts, which deal mostly with matters apart from the 'household', such as farm labour, shipping ventures, fines for delinquency. Mr. Brownbill's Introduction is a valuable contribution. After a brief survey of the passing of the old order in Furness and the consequent rise of minor families to prominence, he gives such facts as are known about this branch of the Fell clan, and deals fully with the period (1673-78) covered by the accounts, which are discussed in detail. We only wish that Mr. Brownbill had added a summary of the accounts as a whole: it would perhaps have accentuated the grave shortage of money at

this period and the extent to which the community was dependent upon temporary loans among neighbours.

The 'Note' on the part played by women in those days is less happily conceived and lacks both local colour and perspective. A household, run by three sisters with the aid of 'our man' and at most two maids, can scarcely be described as a 'large establishment'; and to suggest that 'the wages of the household and farm servants do not appear in these accounts' impugns the whole character of this book, in which the wage of every employed person is scrupulously set down and even the sale of half a cabbage recorded. There is nothing in the accounts to support Miss Clark's statement that women were paid at a higher rate for 'mowing corn and shearing sheep'. Corn is not *mown* in Lancashire and the meadow grass was mown by men. It was corn and 'bigge' that were sheared by women—not sheep. To assert that in 1675 'scarcely any roads existed in England' and 'wheel traffic was probably unknown in the Swarthmoor district' is unwise in face of the items for repair of cart wheels in the accounts. The main roads of the district may not have been fit for motor traffic, but the by-roads and lanes leading to moorland farms were no worse when George Fox surveyed them from the top of Pendle Hill than they are to-day, and many that then existed have long since disappeared. Inaccuracies such as these detract from the value of an otherwise useful note.

The accounts themselves take up 510 pages, of which some 120 odd are blank: a waste of paper in these days of high prices. Then follow 74 pages of notes, most of them of exceptional interest and value. The Index is not so complete as could be wished.

J. W. R. PARKER.

Liber Feodorum. The Book of Fees, commonly called Testa de Nevill, reformed from the earliest MSS. By the Deputy Keeper of the Records. Part i, A.D. 1198-1242. 10½ x 7. Pp. xxxviii + 636. Obtainable at H.M. Stationery Office, Imperial House, Kingsway, W.C. 2. 21s. net.

In 1807 the Old Record Commission published an edition of the *Testa de Nevill* which has been described by Dr. J. H. Round as 'at once the hunting ground and the despair of the topographer and the student of genealogy'. The editor of this new edition, Sir Henry Maxwell-Lyte, is more caustic, the work has 'notorious faults', and 'bristles with error and confusion throughout'. With this adverse criticism all students who have used the old *Testa*, and tried in vain to get any satisfactory information from it, will cordially agree.

The two volumes, from which the 1807 edition was printed, are now shown to have been compiled in 1302 for the purpose of levying an aid for the marriage of the eldest daughter of Edward I; and in order to help the officers of the Exchequer, a considerable number of original returns and other documents were transcribed in book form for convenience of reference. The entries were arranged under counties, or pairs of counties when there was a joint sheriff, and this rearrangement of the original material proved a veritable pitfall for the transcriber.

Two characteristic instances of this are noted in the preface to the present edition. The scribe copied an eyre roll relating to Yorkshire Lincolnshire, and Lancashire consecutively, heading each page with the words *Com' Ebor'*; after completing the transcript he discovered his error and endeavoured to correct it by altering the headings, but nevertheless, the matter relating to Lincolnshire and Lancashire remains imbedded in the section relating to Yorkshire. The other difficulty was where returns were made, not under counties, but under honours extending over several counties. 'If such a return were cut up and distributed, its unity was destroyed, and the connexion between the separated parts obscured; if the whole return were placed under the county that contained the *caput* of the honour, the lands that lay in other counties were misplaced. No uniform method was devised to deal with such difficulties.'

In the present edition the old arrangement has wisely been departed from; the text has been taken from the original documents where extant, and others which were not included in the two volumes of transcripts. We thus get as far as possible a series of returns, arranged in chronological order, beginning with the aid or tallage of 1198. A special introduction is prefixed to each section, explaining the origin and nature of its contents, and the grounds for assigning its date. The experts responsible for them seem to have exhausted every available source of information in order to narrow the possible limits of date, and the care and research displayed in the effort are worthy of the highest praise.

Sir Henry gives an interesting explanation of the curious name by which the two original volumes were known. 'The officers of the medieval Exchequer were wont to mark particular collections of records with symbols as well as with verbal inscriptions. . . . At least five of the receptacles for records in the Treasury of the Exchequer bore drawings of human heads. King Edward was represented wearing a crown, the Archbishop of Canterbury wearing a mitre, and John le Latimer with a triple head, befitting an interpreter. In view of these facts, it seems likely that the receptacle for certain early documents relating to knight's fees, serjeanties, and the like, bore the drawing of a head, the head of Nevill.' *Testa*, of course, is good low Latin for a head, whence the French *tête*; the particular Nevill thus immortalized has not been identified.

The caution given on p. xx, that the Book of Fees is a collection of evidences, and not of itself a record, is wise and timely; nevertheless it seems probable that in most cases the original returns, from which the book was compiled, would be accepted as matters of record. The value of the present edition (for the old edition had little or none) is well summed up on p. xxi,—'to the student of tenures it is of the first importance; to the genealogist and topographer it is equally indispensable. and those interested in these subjects will need no incitement to consult it.' To which we may add that the students aforesaid will accord their hearty thanks to Sir Henry and his able assistants for reducing the chaos of 1807 to an intelligible and useful shape.

W. PALEY BAILDON.

The Historic Names of the Streets and Lanes of Oxford intra Muros.

By H. E. SALTER, with a Map and Preface by ROBERT BRIDGES.
8 $\frac{3}{4}$ x 5 $\frac{3}{4}$; pp. 26. Oxford: Clarendon Press. 3s. 6d.

Mr. Salter's name attached to this little brochure is such high guarantee for the absolute accuracy of the evidence contained in it, of the ancient names of Oxford's streets, that criticism is at once excluded, and if the authorities decide to carry out the modest suggestions for the restoration of certain historic names, they will have behind their action the full weight of Mr. Salter's unrivalled knowledge of the topography of the city. This knowledge, acquired by untiring research, enables him to correct Anthony Wood on many points. Yet no one would, we venture to think, have welcomed Mr. Salter's proposed restorations more warmly than Wood himself. Both uphold the name Cat Street, but while Mr. Salter condemns the new-fangled propriety which altered it to St. Catherine Street (and also we imagine the fine-flavoured Hell to the sickly St. Helen's Passage), we find Wood inveighing against a false antiquarianism, when he records that in 1670 a paper was affixed to the maypole at the top of Cat Street to the effect that 'that street should as antiently be called Gratian Street, which is false'.

Remarkable is the absence of any stable names for some of the chief arteries of traffic. Mr. Salter notes that the High and Cornmarket Streets are sometimes spoken of as Eastgate and Northgate Streets, but even in the seventeenth century they are as commonly described as high streets with such explanatory additions as the High Street leading to Balliol College in the case of Broad Street.

Such ponderous nomenclature can hardly have been possible in ordinary life, and one may suspect that the titles Eastgate and Northgate Streets and Canditch were the common names. The same is probably true of the short length from Ship Street to Broad Street, which as late as 1664 is described as the way leading through the Turl.

Of other names mentioned in the book, Bullock's Lane occurs in a lease of 1659; New Inn Hall Lane (we prefer 'Seven deadly Sins') in a will of 1677; and Somenor's Lane (now Ship Street) was still in legal use in the seventeenth century.

It would be interesting to know why, if, as Mr. Salter shows, Alfred Street has a history that can be traced back to 1220, in one Christ Church lease between 1655 and 1670 it is described as 'the New Lane, now Beare Lane'.

We are more than glad to see a plea for the restoration of Bocardo Lane. So interesting a name should certainly not be allowed to perish. Besides, the present title St. Michael's Street is both incorrect and superfluous. The purpose of this little book will surely find very wide support from all lovers of Oxford.

E. T. LEEDS.

Ertog og Øre: den gamle norske vegt, av A. W. Brøgger (Videnskabs-selskapets Skrifter, II. Hist.-filos. Klasse, 1921, no. 3). Kristiania, 1921; pp. 112; 58 figs. and 2 plates.

This treatise on early metrology is dedicated by Dr. Brøgger to Sophus Müller, of Copenhagen. Hon. F.S.A., who reached the age of

seventy-five on 24th May. It deals mainly with the *Ertog* and *Øre* of Norway, but touches incidentally on finds in neighbouring countries, including Great Britain and Ireland. The old Norse weight-system was as follows: 1 mark = 8 ører = 24 ertogar = 240 penninger; and the author's principal aim is to fix the values of these denominations and so link up the system with others in the ancient world. The mark was about $6\frac{3}{4}$ oz. Troy; and an examination of many weights yields an average of 26.8 grams (413 grains or 17 dwt. 5 gr. or 0.86 oz. Troy) for the øre (derived from *aureus*). In the fourth and fifth centuries gold in the form of collars, armlets, coils, etc., evidently served also as currency, and the weights show that they were based on the Roman pound (327.45 grams) of 12 ører, not on the mark of 8 ører, which was pre-eminently the silver system. The division of 1 ertog into 10 penninger is found to go back to the fifth century; and in the Viking period the ertog (about 7.9 grams) becomes more important than the øre, the symbol for which on the weights is a triskele. Another symbol, a triangular stamp enclosing three dots, is taken to indicate three scripula of 0.973 gram, the unit being about 2.9 grams, as indicated by the two weights figured on p. 75 (to which there are incorrect references on p. 74). This unit is found in the set of coin-weights from Gilton, Kent, described in *Inventorium Sepulchrale*, p. 23.

The interesting series found at Island Bridge, near Dublin (not Ballyholme as stated on p. 77), dates from the early ninth century and contains two weights approximately of øre value. Another set from Colonsay on the west coast of Scotland is a century later, and includes a reduced øre of 25.81 grams. A parallel to fig. 36 (disc weight with embossed bronze cap) might have been quoted from Mildenhall (*V. C. H. Suffolk*, i, 345), but its value has no obvious relation to the øre, though it is four times no. 4 in the Irish set, being 3,810 grains = 247.4 grams, only 30 grains short of 8 oz. Troy.

Cheese-shaped weights of the late Viking period contrast with the disc weights both in shape and standard, being based on a lighter øre, ranging between 24 and 22 grams. These are followed by weights in the form of brass horses; and the royal mark in 1286 weighed about 211.3 grams, in 1529 about 211.9 grams.

A select bibliography gives a measure of the author's industry in research, and a sequel dealing with the international relations indicated by the weight-system of Norway is bound to throw light on the archaeology of the Anglo-Saxon period. Such friendly co-operation is assured of a warm welcome in England.

REGINALD A. SMITH.

Periodical Literature

Archacologia, vol. 70, contains papers on the Wardrobe and Household Accounts of Bogo de Clare, 1284-6, by Mr. M. S. Giuseppi; on a set of Elizabethan heraldic roundels in the British Museum, by Mr. Ralph Griffin and Mr. Mill Stephenson; on two forfeitures in the year of Agincourt, the more important being that of Henry, Lord Scrope of Masham, by Mr. C. L. Kingsford; on the British Museum excavations at Abu Shahrein in Mesopotamia in 1918, by Mr. R. Campbell Thompson; on Sumerian Origins and Racial Characteristics, by Professor Langdon; on Paris Garden and the Bear-baiting by Mr. C. L. Kingsford; on the excavations at Hal Tarxien, Malta, third report, by Professor T. Zammit; and on the Dolmens and Megalithic Tombs of Spain and Portugal, by Mr. E. Thurlow Leeds.

The Proceedings of the Society of Antiquaries, vol. 32, the last volume which will be published as its place is now taken by this Journal, contains the following papers: Report as Local Secretary for Hampshire, recording two palaeolithic implements from Dunbridge, by Mr. W. Dale; a holy-water stoup or mortar from St. Bartholomew the Great, by Mr. E. A. Webb; the chronology of flint daggers, by Mr. Reginald Smith; excavations at El-Mukayyar, Abu Shahrein, and El 'Obcid in Mesopotamia, by Dr. H. R. Hall; an Anglo-Saxon carving recently discovered at Winchester, by Mr. O. M. Dalton; a detail from the mosaic pavement at Umm Jerar, Palestine, by Mr. Dalton; a sculptured marble slab from northern Mesopotamia, also by Mr. Dalton; the Breadalbane brooch, by Sir Hercules Read and Mr. Reginald Smith; the ancient manor house of the bishopric of Winchester at Esher, by Rev. J. K. Floyer; Report as Local Secretary for Sussex, recording the discovery of an unusual palaeolithic implement and an unfinished neolith at West Chiltington, by Mr. R. Garraway Rice; some Bronze Age and other antiquities, by Mr. O. G. S. Crawford; two bronze bracelets belonging to the Royal Institution of Cornwall, by Mr. Reginald Smith; the excavations at Fostât, by Mr. Somers Clarke; a bamboo staff of dignity of the seventeenth century, by Right Rev. Bishop Browne; the 'Devil's Ninepins' at Ipsden, a stone circle erected at the beginning of the nineteenth century, by Mr. H. G. W. d'Almaine; a gold ring, probably of the Anglo-Saxon period, from Meaux Abbey, by Mr. H. Clifford Smith; cups and other objects in turned wood, also by Mr. Clifford Smith; some English alabaster tables, by Dr. W. L. Hildburgh; an English bronze processional cross and other examples of medieval metal-work, by Dr. Hildburgh; worked quartzites from Caddington and Gaddesden Row, by Mr. R. L. Sherlock; the seal of Harold's College of Waltham Holy Cross, by Mr. C. H. Hunter Blair; some arrow-heads from the battlefield of Marathon, by Mr. E. J. Forsdyke; the Presidential Address, on Archaeology and War, by Sir Hercules Read; Silchester and its relations to the pre-Roman civilization of Gaul, by Lt.-Col. Karslake;

the heraldry of Cyprus, by Mr. G. E. Jeffery; Elizabethan Madrigals, by Dr. E. H. Fellowes; head of a military effigy in Peterborough Museum, by Professor F. P. Barnard.

The Archaeological Journal, vol. 74, contains the following articles: The Norman school and the beginnings of Gothic architecture: two octopartite vaults; Montivilliers and Canterbury, by Mr. John Bilson; the first castle of William de Warrenne, by Mr. Hadrian Allcroft; the evidence of Saxon Land Charters on the ancient road system of Britain, by Dr. G. B. Grundy; some further examples of English medieval alabaster tables, by Dr. Philip Nelson; an enamel of the Carolingian period from Venice, by Mr. H. P. Mitchell; a purbeck marble effigy of an abbot of Ramsey of the thirteenth century, by Dr. Philip Nelson; the Perjury at Bayeux, by Mr. W. R. Lethaby; and notes on colleges of secular canons in England, by Mr. Hamilton Thompson.

The Journal of the British Archaeological Association, new series, vol. 26, contains papers by Mr. C. E. Keyser on the architecture of the churches of Brigstock and Stanion, Northants; by Mr. Philip Laver on the Roman wall of Colchester; by Mr. G. C. Druce on the medieval Bestiaries and their influence on ecclesiastical decorative art; by Prebendary Clark-Maxwell on the abbey of Lilleshall; and by Dr. de Gray Birch on giants, old and new. There is also a fully-illustrated account of the Association's meeting at Shrewsbury in July 1920.

The Journal of the Royal Anthropological Institute, vol. 50, part 2, contains amongst communications dealing with ethnology and physical anthropology, a paper on the implement-bearing deposits of Taungs and Tiger Kloof in the Cape Province of South Africa, by Rev. Neville Jones.

The English Historical Review, vol. 36, July 1921, contains the following articles: the dating of the early Pipe Rolls, by Dr. J. H. Round; the 'De arte venandi cum avibus' of the Emperor Frederick II, by Dr. C. H. Haskins; Writs of Assistance, 1558-1700, by Mr. E. R. Adair and Miss F. M. Greir Evans; the London West India interest in the eighteenth century, by Miss Lillian M. Penson; a list of original Papal Bulls and Briefs in the Department of MSS., British Museum, by Mr. H. Idris Bell; the beginnings of Cambridge University, by Rev. H. E. Salter; an 'attracted' script, by Miss G. R. Cole-Baker; Englishmen at Wittenberg in the sixteenth century, by Mr. Preserved Smith.

The Genealogist, vol. 37, part 4, contains papers on the De Clares of Clare in Suffolk (earls of Gloucester) and the De Cleres of Ormesby and Stokesby in Norfolk, by Mr. Walter Rye; a continuation of Mr. William Carter's paper on the early Crewe pedigree; on Campbell, earl of Loudoun, by Mr. H. Campbell; extracts (continued) from a seventeenth-century note-book, by Mr. K. W. Murray; the 18th part of Mr. H. O. Aspinall's study of the Aspinwall and Aspinall families of Lancashire; marriage licenses of Salisbury, by Canon E. R. Nevill and Mr. R. Boucher; and on marriage settlements by Mr. G. W. Watson. The part also contains further instalments of the index to marriages from *The Gentleman's Magazine*, by Mr. E. A. Fry; and of

the Hampton Court, Hampton Wick, and Hampton-on-Thames Wills and Administrations, edited by Mr. H. T. McEleney.

The Numismatic Chronicle, 5th series, vol. 1, nos. 1 and 2. contains papers by Mr. E. S. G. Robinson on Greek coins from the Dardanelles; by Mr. E. Rogers on some new Seleucid copper types; by Mr. E. S. G. Robinson on Aspeidas, satrap of Susiana; by the late Mr. F. W. Hasluck on the Levantine Coinage; by Mr. L. Woosnam on two place-names on the Anglo-Saxon coins; by Mr. L. M. Hewlett on a gold coin of the Black Prince of the Figecac mint; by Mr. L. A. Lawrence on a second specimen of the Crown of the Rose; by Mr. H. Symonds on the Irish silver coinages of Edward IV; by Mr. E. Bernays on a rare penny struck about 1346 at Arlon, Belgium; and by Mr. A. R. S. Kennedy on the medals of Christ with Hebrew inscriptions. In the Miscellanea Mr. H. Mattingley records a find of Roman denarii near Nuneaton, and Professor Barnard describes some unrecorded tokens.

The Library, new series, vol. 2, no. 1, contains papers on Samuel Pepys's Spanish books, by Mr. Stephen Gaselee; on the reappearance of the texts of the Classics, by Professor A. C. Clark; and on the initial letters and factotums used by John Franckton, printer in Dublin 1600-18. by Mr. E. R. McC. Dix.

The Transactions of the Bibliographical Society, vol. 15, contains the following papers: The family letters of Oliver Goldsmith, by Sir Ernest Clarke; John Rastell, printer, lawyer, venturer, dramatist, and controversialist, by Mr. A. W. Reed; the writings of Sir James Ware and the forgeries of Robert Ware, by Mr. Philip Wilson; Scottish bookbinding, armorial and artistic, by Mr. E. G. Duff; the small house and its amenities in the architectural handbooks of 1749-1827, by Mrs. K. A. Esdaile; the regulation of the book trade before the Proclamation of 1538, by Mr. A. W. Reed; and on the Hand List of Scientific MSS. in the British Isles dating from before the sixteenth century by Mrs. D. W. Singer.

Proceedings of the Cambridge Antiquarian Society, vol. 22, contains the following papers: The Augustinian Friary in Cambridge and the History of its Site, by Dr. D. H. S. Cranage and Dr. H. P. Stokes; College accounts of John Botwright, Master of Corpus Christi 1443-74, by Dr. E. C. Pearce; the ruined mill or round church of the Norsemen at Newport, Rhode Island, U.S.A., compared with the round church at Cambridge and others in Europe, by Dr. F. J. Allen; notes on Horseheath schools and other village schools in Cambridgeshire, by Miss C. E. Parsons; and a report on the objects of antiquarian interest found in the coprolite diggings during 1917 and 1918 by Mr. and Mrs. N. T. Porter.

Proceedings of the Dorset Natural History and Antiquarian Field Club, vol. 41, contains the following papers dealing with archaeological subjects: Dorset volunteers during the French wars, 1793-1814, by Mr. H. Symonds; Sandsfoot castle, Weymouth, by Mr. W. C. Norman; some old inns of Wimborne, by Dr. E. Kaye le Fleming; a glimpse of Weymouth and the war, 1802-3, by Rev. W. O. Cockcraft; and Tudor houses in Dorset and the contemporary life within

them, by Mr. Vere Oliver. The volume also contains a general index to the first forty-one volumes of the Proceedings.

The Essex Review, vol. 30, July 1921, contains a continuation of the transcripts of the accounts of the ministers of St. Osyth's priory; a second supplement of the Rev. E. Gepp's contribution to an Essex dialect dictionary; Rogues of the Epping road, dealing with highwaymen, by Mr. W. C. Reedy; an article on Killigrews, a moated house between Chelmsford and Ingatestone, by Mr. G. W. Saunders; and sources for lists of Essex clergy, under the Long Parliament and Commonwealth, by Rev. Dr. Harold Smith.

Papers and Proceedings of the Hampshire Field Club and Archaeological Society, vol. 9, part 1, contains the following papers of archaeological interest: some notes on the manor of East Tytherley, by Mrs. Suckling; the Winchester college bells and belfries, by Mr. Herbert Chitty; church goods in Hampshire, A. D. 1549, transcribed by Mr. T. Craib, with additional notes by Mr. J. Hautenville Cope (continued from vol. 8); New Forest round barrows which do not conform to either of the three standard types, by Mr. H. Kidner. Among the shorter notes are an account of an interment of the Bronze Age found at Dogmersfield, by Mr. W. Dale; on earthworks near Basingstoke, by Messrs. J. R. Ellaway and G. W. Willis; some heraldic notes, by Mrs. Cope; and an account of the discovery of a Bronze Age site at Shorwell, Isle of Wight.

Transactions of the London and Middlesex Archaeological Society, new series, vol. 4, part 3, contains papers on surviving City houses built after the Great Fire, by Mr. W. G. Bell; on the Strand in the seventeenth century: its river front, by Mr. W. H. Godfrey; and on the worshipful company of Grocers, by Mr. R. V. Somers-Smith.

Norfolk Archaeology, vol. 21, part 1, contains the following papers: The manorial history of Little Ellingham, by Mr. J. C. Tingey; an additional note on the Paston brass at Paston, recording the fact that the two inscriptions are palimpsest, by Mr. Mill Stephenson; church plate in Norfolk: Deanery of Holt, by Mr. J. H. F. Walter; notes on three palimpsest brasses recently discovered in Norfolk, by Mr. H. O. Clark; Tudor ceiling at no. 22 St. Giles Street, Norwich, by Mr. E. H. Buckingham; King John's sword (King's Lynn), by Mr. Holcombe Ingleby; recent discoveries in Norwich and Thetford (chiefly of Romano-British and medieval pottery), by Mr. W. G. Clarke; the earliest roll of household accounts in the Muniment Room at Hunstanton for the second year of Edward III [1328], by Rev. G. H. Holley; literature relating to Norfolk Archaeology and kindred subjects, 1916-20, by Mr. G. A. Stephen.

Proceedings of the Society of Antiquaries of Newcastle-upon-Tyne, 3rd series, vol. 9, contains the following papers: an interleaved copy of Lilly's *Merlini Anglici Ephemeris* with a diary of Major John Sanderson from January to December 1648 written on the interleaves, by Mrs. Wynne-Jones; a list of clerks of the peace for Northumberland, by Mr. J. C. Hodgson; minor historians and topographical writers of Northumberland, by Mr. J. C. Hodgson; a list of the abbots of Alnwick, by Mr. A. M. Oliver; Hilton castle, by Rev. E. J. Taylor; ruined Northumbrian churches, by Mr. J. W. Fawcett, being the

substance of a MS. compiled by Rev. T. Randal about 1770; calendar of the Coleman Deeds relating to Durham and Northumberland in the Newcastle Public Library; a bronze dish (? grasset) found near Otterham; the township of Spittle, by Mr. J. C. Hodgson; chantries in Northumberland, from Randal's MS., by Mr. J. W. Fawcett; Heron estates and Wark tenants, by Mr. J. C. Hodgson; enclosure awards, co. Durham, by Mr. E. Wooler; distribution of the Papists' horses within the county of Northumberland 1688-90; discoveries in the Pummer colliery, near Barnsley, Yorks., by Mr. T. Ball; two Roman altars from Chester-le-Street; seal of Dr. John Cradock, archdeacon of Northumberland, 1604, by Mr. F. E. Macfadyen; Lords Lieutenant of Northumberland, by Dr. F. W. Dendy; traces of the Keltic pantheon found during the Corbridge excavations, by Lt.-Col. Spain; Reynold Gideon Bouyer, sometime archdeacon of Northumberland, by Mr. J. C. Hodgson; two MS. account books of household and farm expenses 1749-64, by Mr. J. Oswald; an early military effigy in St. Nicholas's church, Newcastle, by Mr. R. C. Clephan; title to the tithes of Fowberry, Northumberland; correspondence of the late Dr. Greenwell on the subject of the Neville screen in Durham cathedral; a Newcastle silver kettle, by Mr. W. H. Knowles; Vicars of Ponteland, by Mr. H. M. Wood; effigies in St. Mary's church, Stamfordham, by Mr. C. H. Hunter Blair; the sculptured reredos, Stamfordham church, by Mr. A. Hamilton Thompson; Bambro' church and Nostell priory, a MS. by the late Rev. James Raine; the will of a Jacobite refugee, by Mr. J. C. Hodgson; knitting sheaths, by Mrs. Willans; the well in the castle keep, Newcastle; early schools in Northumberland, by Mr. J. W. Fawcett; ceiling in Mitford House, Morpeth; Roman coins from Chester-le-Street, by Rev. A. D. E. Titcombe; deeds relating to Durham county, by Mr. William Brown; a pilgrimage to the Roman wall.

Surrey Archaeological Collections, vol. 33, contains the concluding part of Mr. Mill Stephenson's list of monumental brasses in the county; and papers by Sir Henry Lambert on Banstead in the middle of the eighteenth century; by Mr. H. E. Malden on notes on some farms in Capel; by the President, Lord Onslow, on local war records; by Mr. R. L. Atkinson on manuscript maps of Surrey, with a list of known examples in the Public Record Office; and by Mr. P. M. Johnston on Well House Farm, Banstead.

The Wiltshire Archaeological and Natural History Magazine, vol. 41, June 1921, contains a calendar by the Rev. A. W. Stote of MSS. belonging to the Wiltshire Society, relating to the manors of Bradford and Westwood, and papers on Roman Wanborough, by Mr. A. D. Passmore; and on the Anglo-Saxon bounds of Bedwyn and Burbage, by Mr. O. G. S. Crawford.

Publications of the Thoresby Society, vol. 26, part 1, contains papers on the Old Hall, Wade Lane, Leeds, and the Jackson family; on Birstall, Gomersal, and Heckmondwike, a genealogical paper, by Mr. W. T. Lancaster; a continuation of the transcripts of inscriptions on the tombstones in the churchyard of Leeds Parish church; on Ellis of Kiddal; a continuation of extracts from the *Leeds Mercury*, 1737-42; on the Denison family and on the Old Hall, Burmantofts.

Vol. 27, part 1, of the same publication, contains a further instalment of *Testamenta Leodiensia*, 1553-60.

The Yorkshire Archaeological Journal, vol. 26, part 2, contains the following papers: Ancient heraldry in the deanery of Harthill, by Rev. C. V. Collier and Rev. H. Lawrence; seventeenth-century plaster work in the parish of Halifax, by Mr. H. P. Kendall; and a further instalment, continued from vol. 24, of the late Sir Stephen Glynne's notes on Yorkshire churches made towards the middle of the last century. Among the notes is the record of a polished neolithic celt found at Harrogate in 1905, but not hitherto published.

The Scottish Historical Review, vol. 18, no. 4, contains the following papers: Mr. Robert Kirk's Note-book, 'a miscelany of occurring thoughts on various occasions', by Dr. David Baird Smith; the Appin Murder 1752: cost of the execution, by Dr. W. B. Blaikie; a seventeenth-century deal in corn, by Sir Bruce Seton; the earl of Arran and Queen Mary, by Professor R. K. Hannay; and an old Scottish handicraft industry (hand knitting) in the north of Scotland, by Miss Isabel F. Grant.

The History of the Berwickshire Naturalists' Club, vol. 24, part 2, contains the anniversary address by the President, Mr. J. H. Craw, on early types of burial in Berwickshire, with a list of Bronze Age burials in the county; notes on Jedburgh abbey, by Mr. John Ferguson; an old Roxburgh charter (to the abbey of Dryburgh, c 1338), by Very Rev. D. Paul; and Berwick-upon-Tweed typography, a supplementary list, by Mr. J. L. Hilson.

Archaeologia Cambrensis, 7th series, vol. 1, part 1, June 1921, contains papers on some problems of prehistoric chronology in Wales, by Dr. R. E. Mortimer Wheeler; an interim report on the excavations at Segontium, by Mr. A. G. K. Hayter; on the Scandinavian settlement of Cardiff, by Dr. D. R. Paterson; a continuation of Mr. Harold Hughes's paper on early Christian decorative art in Anglesey; and a report of the investigation of Pen y Gaer, near Llangollen, by a Committee of the Ruabon and District Field Club. Among the miscellaneous notes are the record of the discovery of a socketed celt on Garth mountain, Llangollen; of the identification of the old burial ground of the Society of Friends in Llanyre, Radnorshire; and of the discovery of a cist with neolithic human remains on the Black Mountains.

Transactions of the Carmarthenshire Antiquarian Society, part 38, contains, among a mass of short notes of immediate local interest, the following papers: Answers to the several articles delivered to the minister and churchwardens of Llanfynydd, 1789, by Mr. G. E. Evans; survey of the Crown manor of Mab Utryt in 1650, by Mr. A. W. Matthews; Llanfihangel uch Gwili chapel, 1792, by Mr. G. E. Evans; a description of the exhibition in the National Museum illustrating prehistoric Wales; notes on Whitland abbey; Carmarthenshire presentments (1), by Mr. G. E. Evans; the letters of Rev. Griffith Jones to Madam Bevan; and porcelain plaques made at Llanelli.

The 46th Annual Bulletin of the Société Fersinaise contains the following papers: on the career of Edward de Carteret, 1519?-1601, by Mr. R. R. Lemprière; a continuation of the list of Avocats de la

cour royale ; a transcript from the State papers Domestic of James I of Sir John Peyton's book of disbursements upon the castles of Jersey ; notes on the early constitutional history of the Channel Islands, by Col. T. W. M. de Guérin ; a description of a comparative series of flint implements from the valley and plateau lands of the Somme, in the Society's museum, by Captain J. D. Hill ; and the blazon or written description of the arms of the Lords and Keepers of the Isles and of the Governors of Jersey, by Major N. V. L. Rybot.

Bulletin Archéologique, 1919, part 2, contains the following reports and communications: An armorial pendant with the arms of Châtillon-Dampierre, by M. G. Poulain ; on the discovery of a neolithic station at Loex, Haute-Savoie, by M. S. Reinach ; on recent discoveries in the cathedral of Reims, by Canon Chartraire ; on a stone cross at Semond, Côte-d'Or, by M. F. Daguin ; on a Merovingian carving in the museum at Évreux and a sculpture in the apse of the church of St. Étienne-de-Vauvray, by M. L. Coutil ; on a bas-relief in the museum at Amiens representing a miracle of St. Nicholas, by M. Max Prinnet ; on the excavations in Tunis in 1918, by M. Merlin ; on inscriptions from Algeria, by M. Gsell, and on *Sacculum frugiferum*, by the same author ; on Christian inscriptions at Mdaourouch, by M. Monceaux ; on three Roman inscriptions discovered at Madaure, by M. Gsell ; on potters' stamps, by Father Delattre ; on a liturgical comb found at Bône, by M. Damichel ; on the excavations in Morocco, by M. Chatelain ; on M. Novak's discoveries at Mahdia and Sfax, by M. Merlin ; on Roman inscriptions from Algeria, by M. Carcopino ; report on the excavations in Algeria, by M. A. Ballu ; on Roman antiquities from Tamgout d'Azarga, by M. Carcopino ; statuettes and reliefs in terra-cotta discovered at Carthage, by M. Merlin ; the Punic cemetery at Sidi-Yahia, near Ferryville, and a note on a Gnostic intaglio, by the same author ; the round temples dedicated to Saturn in Roman Africa and their probable origin, by M. J. Toutain ; an inscribed Punic lamp, by M. E. Vassel ; the 'allée couverte' of Bois Couturier on the hill of Cléry-en-Vexin, by MM. L. Plancouard and H. R. Branchu ; small lead wheels and their persistence in Gaul, by M. G. Chenet ; discoveries in the ancient enclosure of Mont Afrique, by M. A. Blanchet ; the excavations at Pèbre, Var, by Abbé Chaillan ; a Gallo-Roman funerary stele with an inscription of the Carolingian period in the church at Molinot, Côte-d'Or, by M. Perrault-Dabot ; the martyrdom of St. Denis, by M. L. Maître ; the church of St. Martin at Moissac, by M. J. Momméja ; capitals in Roman buildings, by M. J. Formigé ; a studio tradition of the Van Eycks, by Comte P. Durrieu ; on the picture of the carrying of the Cross at Anjou, by Canon Urseau.

Revue Archéologique, 5th series, vol. 13, April-June 1921. The chief articles in this number are an account of the excavations at Curtea de Argesch in Roumania, by M. G. I. Bratianu ; on a collection of ostraca dealing with the 'Thiasos', a body charged with the burial of the sacred ibis and falcon, at Ombos, by M. Henri Sottas ; a continuation of M. André Joubin's article on the archaeology of Mediterranean Languedoc ; on Irish petroglyphs, by the Abbé Breuil ; and on the ram of Baal-Hammon, by M. E. Vassel.

Bulletin monumental, vol. 80, parts 1 and 2, contains the following articles: the architecture of French Burgundy under Robert the Pious (988-1031), by Vicomte Pierre de Truchis; Burgundian Romanesque bell-towers, by M. Marcel Aubert; barrel vaults and groined vaults without transverse ribs, by M. E. Lefevre-Pontalis; vaults 'en chaînette', by M. J. Formigé; the abbey church of Fontgombault, by M. L. Demenais; the head of a twelfth-century statue discovered in the church of St. Rémi, Reims, by M. H. Deneux.

Comptes rendus de l'Académie des Inscriptions et Belles-Lettres, November-December 1920, contains the following papers: a mosaic with inscription discovered at Tipasa, by M. E. Albertini; the pulpit in the Grand Mosque at Algiers, by M. G. Marçais; the royal Persian 'Paradeisos', at Sidon, by M. Clermont-Ganneau; the Osirian Ennead, by M. G. Jéquier; Graciosa, a forgotten Portuguese town in Morocco, by Comte H. de Castries; and a military diploma from Corsica, by M. R. Cagnat.

Mémoires de la Société des Antiquaires de Picardie, 4th series, vol. ix. The whole volume of 579 pages consists of a treatise by the Vicomte A. de Calonne, Président d'Honneur of the Society, on Agricultural Life under the *ancien régime* in the north of France.

Mémoires de la Société des Antiquaires de la Morinie, vol. 32, contains papers by Canon O. Bled on the relics of St. Omer and of St. Bertin; by M. A. Carpentier on the church at Isbergues, a record based on the parochial accounts and archives; by M. Justin de Pas on the sergeants *à verge* of the municipality of St. Omer; and on the urban militia and constables of St. Omer by the same author.

Bulletin historique de la Société des Antiquaires de la Morinie, part 255, vol. 13, contains a note on the discovery of twelfth-century *deniers* at St. Omer, by M. C. de Pas; on the fire at the convent of the Cordeliers at St. Omer in the fourteenth century, by M. M. Lanselle; a revolutionary fête at Tatinghem, by the same author; and on the origin of the castellary of St. Omer, by M. J. de Pas, being a review of M. Blommaert's *Les Châtelains de Flandre*.

Annales de l'Académie royale d'archéologie de Belgique, vol. 68, parts 1 and 2, contain a study by M. G. Willemsen on the organization of the Cloth Trade at Bruges, Ghent, and Malines in the middle of the sixteenth century; and papers on the retable at Haekendover, by Canon R. Maere; and on the miraculous in the Hackendover legend, illustrated by this retable, by M. Emile H. van Heurck.

Parts 3 and 4 of the same publication contain the concluding portion of M. Willemsen's article on the Cloth Trade; and papers on the castle of Vilvorde, by M. Armand de Behault de Dornon; on the chapel of St. Anne at Auderghem, by M. Victor Tahon; and on the return of Van Eyck's picture of the mystic Lamb in 1815 after its capture by the French.

L'Anthropologie, tome xxx, nos. 5-6. The place of honour is given to a paper on the oldest industry of St. Acheul, by M. Vayson, who has acquired the collection of the late Professor Commont and endeavours to improve upon the conclusions drawn from it by that lamented specialist. Besides figures in the text it is illustrated by no less than sixteen plates, but the text goes into details that obscure the

main issue; and his view that 'gloss' is due to use does not meet the case in England. M. de Morgan furnishes interesting notes on a mining hammer-head of American type from the Caucasus; a curiously-hafted Swiss celt; and spatulate flints from Elam, perhaps allied to those from Abu Shahrein. An analysis of the earliest decorative art of Denmark is topical enough, but Dr. Sophus Müller's explanation of the dotted lines seems preferable to the remote connexion suggested with the Cave art of Spain, by way of Mas d'Azil. In a summary of M. Hubert's paper on sexagesimal numeration in the Bronze Age, mention is made of a water-clock of British type from Nimrūd and the system is attributed to Mesopotamia. The Hindus divided the day by this means into sixty hours of twenty-four minutes each. MM. Gaden and Verneau make an important contribution to African prehistory in describing neolithic sites and burials in the neighbourhood of Lake Chad.

Tomc xxxi. nos. 1-2, of the same review contains yet another explanation of the symbols of Gavr'inis, this time on the Bertillon system. Professor Stockis of Liège quotes the pre-Columbian rock-carving on Lake Kejimikoojik, Canada, in support of his view that the 'multiple arch' and other designs are nothing but enlargements of finger-prints, as seen for example on pottery of the dolmen period; and two pages of parallels are supplied. The same idea seems to have struck Alexandre Bertrand and Abel Maître in the early days of prehistoric study. M. de Morgan continues his prehistoric notes and deals with the Stone Age of Somaliland, illustrating several specimens collected by Captain Seton-Kerr and adding parallels from Egypt. Were better drawings of stone implements ever made? A chariot burial of Hallstatt date in the Jura is of interest; and a full account is expected from the Abbé Breuil of a rock-shelter of Le Moustier date about 280 yds. east of Forbes Quarry, Gibraltar. The review of a paper by Gudmund Schütte in the *Scottish Geographical Magazine* (October 1920) gives colour to the theory that some at least of the Scandinavian rock-carvings and cup-markings represent the principal constellations. The suggestion is not altogether new, and Sir Edward Brabrook brought Dr. Baudouin's interpretation before this Society in 1918 (*Proc. Soc. Antig.* xxx, 97).

Fornvännen: Meddelanden från K. Vitterhets Historie och Antikvitets Akademien (Stockholm 1921). Häft 1-2. The main lines of artistic development in the north during what was our Anglo-Saxon period have already been laid down and its various stages approximately dated; but there is still debate on minor points. One of these is dealt with by Nils Åberg, who traces a connexion between Salin's Style III and the Jellinge style of the tenth century, minimizing the effect of the Carolingian Renaissance. Dr. Shetelig, on the other hand, makes the ninth century a time of transition: new elements were incorporated from classical art, and there was a break (as again about 1000-1050) in the development of Teutonic animal ornament. Illustrations from Russia and Ireland show the scope of this inquiry, and a later chapter is contributed by Bernhard Salin, who describes an openwork gilt vane bearing a remarkable resemblance in style and even minute detail to the small panel found under Winchester

cathedral and published in *Proc. Soc. Antiq.* xxiii, 398. Both are in the Ringerike style, though animal forms are more obvious in the vane, which is dated about 1050. There are certainly Irish or Anglo-Saxon features in this style, and further discoveries will be welcomed on both sides of the North Sea. When did the Swedes reach Finland? Gunnar Ekholm passes in review some recent contributions to this perennial controversy, and concludes that the Indo-Germanic ancestors of the Swedes reached Finland about the same time that they reached Sweden—a date for which is hazarded in the *Journal* of last April. Incidentally we are reminded that the single-graves of Jutland, generally placed early in the Passage-grave period, actually begin in the Dolmen period, and indicate a fresh invasion from the south. Sune Lindqvist continues his examination of the funeral rites described in the *Ynglinga Saga*; and another paper on royal graves takes the reader into the Middle Ages. Altogether a number of great value in its bearing on British archaeology.

Notizie degli Scavi di Antichità, vol. 17, parts 10, 11, and 12, contains, amongst shorter notices, the following communications: a hoard of Roman coins found at Fornacete in Vico Pisano, by Sgr. A. Minto; new discoveries in the Tarquinian necropolis at Corneto-Tarquini, by Sgr. G. Cultrera; new discoveries in the city and suburbs of Rome, by Sgr. E. Gatti; various antiquities discovered at Lannoio, by Sgr. A. Galieti; the discovery of a tomb of the Hellenistic Age at Oria, by Sgr. G. Bendinelli; and on a Roman inscription of the Augustan Age from Fordongianus, Sardinia, by Sgr. A. Tarambelli. Professor Paolo Orsi contributes many articles on recent discoveries in Sicily, amongst which may be mentioned those on Siculan burials near Syracuse, a new inscription from the caves of St. Nicholas at Buscemi, a bronze statuette of Athena from Camarina; a village, cemetery, and mines of the aeneolithic age near Canicarao, Ragusa; a mosaic with a representation of the Labyrinth found at Taormina; and a fine fragment of a statue of Nike from Tindari.

The American Journal of Archaeology, vol. 25, no. 1, contains papers on a cylix in the style of Duris, by Mr. D. M. Robinson; on Dynamic Symmetry, a criticism of Mr. Hambidge's book with the same title, by Mr. Rhys Carpenter; on Roman cooking utensils in the Royal Ontario Museum of Archaeology, by Miss C. G. Harcum; and on transformations of the Classic pediment in Romanesque architecture, by Mr. L. B. Holland.

Vol. 25, no. 2, of the same *Journal* contains articles on two vases from Sardis, by Mr. G. H. Chase; on the original plan of the Erechtheum, by Mr. C. H. Weller; on Attic building accounts: iv. the Statue of Athena Promachus, by Mr. W. B. Dinsmoor; and on a group of Roman Imperial portraits at Corinth: i. Augustus, by Mr. E. H. Swift.

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Religion.

- *Vices and Virtues, being a soul's confession of its Sins, with Reason's description of the Virtues. A middle-English dialogue of about 1200 A.D. Edited by Ferd. Holthausen, Ph.D. Part II, Notes and Glossary. $9\frac{1}{4} \times 5\frac{3}{4}$. Pp. 153-268. Milford: for the Early English Text Society. 12s.
- *The Donet. By Reginald Pecock, D.D., Bishop of St. Asaph and Chichester, now first edited from MS. Bodl. 916 and collated with The Poore Mennis Myrrour (British Museum, Addl. 37788), by Elsie Vaughan Hitchcock. $8\frac{3}{4} \times 5\frac{1}{2}$. Pp. xxxii + 271. Milford: for the Early English Text Society. 35s.

Proceedings of the Society of Antiquaries

Thursday, 26th May 1921. Mr. C. L. Kingsford, Vice-President, in the Chair.

Dr. Eric Gardner and Captain George Harry Higson were admitted Fellows.

The Chairman announced that the President had appointed the Rev. Edward Earle Dorling to be a Vice-President of the Society.

Mr. Reginald Smith, F.S.A., read notes on the following exhibits: a hoard of flint celts from Bexley Heath, exhibited by Mr. A. A. Hankey, and a hoard of flint celts from Whitlingham, near Norwich, exhibited by Mr. R. Colman, which will be published in *Archæologia*; two gold crescents and a celt from Cornwall belonging to the Royal Institution of Cornwall; a bronze model shield of the Early Iron Age from Hod Hill, exhibited by Mrs. Ward; a stone mould for making jewellery, from the Roman wall, exhibited by Mr. F. G. Simpson; a stone trial-piece of the Viking period from Scotland, exhibited by Captain G. P. Crowden; and a bone trial-piece of the Viking period, exhibited by Mrs. Allen Sturge. These exhibits will be published in the *Antiquaries Journal*.

Thursday, 2nd June 1921. Sir Hercules Read, President, in the Chair.

Mr. Frank Halliday Cheetham was admitted a Fellow.

Mr. Ralph Griffin, Secretary, exhibited book stamps of Charles I, as Duke of York, of Sir Edward Dering, and of George Wilmer of Stratford-le-Bow.

The Master of St. John's College, Cambridge (Dr. Scott, F.S.A.), exhibited an achievement of the arms of Raven of Elworth Hall.

Rev. H. F. Westlake, F.S.A., exhibited a supposed 'cymbalum' from Westminster Abbey.

The following were elected Fellows of the Society: Professor Frederick Gymer Parsons, Rear-Admiral Boyle Somerville, C.M.G., R.N., Mr. Sidney Herbert Williams, Dr. William Mortlake Palmer, Mr. Osbert Guy Stanhope Crawford, Mr. Athro Charles Knight, Mr. John Gibson, Major-General Bertram Reveley Mitford, C.B., C.M.G., D.S.O., Captain Philip Bertram Murray Allan, Mr. Louis Ambler, Captain William Herbert Murray, and Mr. William Francis Stratford Dugdale.

Thursday, 9th June 1921. Sir Hercules Read, President, in the Chair.

Major-General Mitford, Captain P. B. M. Allan, Mr. A. C. Knight, and Professor F. G. Parsons were admitted Fellows.

Major G. W. Kindersley read a paper on recent discoveries of Roman remains at Welwyn, which will be published in the *Antiquaries Journal*.

Mr. William Whiting read a paper on recent excavations at Ospringe, which will be printed in *Archæologia Cantiana*.

Miss Westlake exhibited, in pursuance of the request of her late father, Mr. N. H. J. Westlake, F.S.A., a panel of glass with the arms of Filmer of East Sutton.

Mr. H. G. W. d'Almaine exhibited a Romano-British cinerary urn of the first century found near Abingdon.

Thursday, 16th June 1921. Sir Martin Conway, Vice-President, in the Chair.

Rear-Admiral Somerville and Mr. Louis Ambler were admitted Fellows.

Sir Rider Haggard exhibited a gold ring from a Peruvian grave.

Mr. W. R. Lethaby, F.S.A., read a paper on the Cotton Genesis and on some gold glasses in the British Museum.

Rev. H. A. Raynes exhibited, through Mr. W. H. Quarrell, F.S.A., two alms-dishes dated 1518 and 1655 from the church of St. Mary Woolnoth.

Thursday, 23rd June 1921. Mr. C. L. Kingsford, Vice-President, in the Chair.

A special vote of thanks was passed to Lady Evans for her gift of a bound volume of the 6 in. Ordnance Survey of Hertfordshire with annotations by the late Sir John Evans.

Mr. S. H. Williams and Mr. W. F. S. Dugdale were admitted Fellows.

The list of Local Secretaries recommended by the Council for appointment for the quadrennial period 1921-5 was approved and adopted.

Lt.-Col. W. Hawley, F.S.A., read a second report on the excavations at Stonehenge, which will be published in the *Antiquaries Journal*.

The ordinary meetings of the Society were then adjourned until 23rd November 1921.

INDEX TO VOL. I

- Abbeyland, Navan (co. Meath), find of treasure trove at, 341.
- Abel, Père F. M., 3, 4 *n*.
- Abercromby, Lord, 134.
- Abingdon (Berks.), Romano - British cinerary urn, 366.
- Acland, Capt. J. E., 270.
- Adams, Robert, 264.
- Adoration of the Magi, depicted on silver flagon, 43, 44.
- Aegina, pottery and bronze objects, 208.
- Agriculture and Fisheries, Ministry of: report to, of discoveries at Amesbury (Wilts.), 125-6, 164.
- Aivasil, or Haghios Vasileios (Greece), bronze and other objects, 211, 215.
- Akerman, J. Y., 87, 186.
- Akhenaten, 144.
- Aksa, mosque of, 12.
- Alabaster tables, 166, 222-31.
- Albury Bottom, Chobham (Surrey), polygonal camp, 305.
- Alexander III of Scotland, coin of, 240.
- Alfred the Great and the battle of Ethandun, 105, 107-15, 117-21.
- Alfred's Castle (Berks.), polygonal camp, 305, 306, 311.
- Allan, Capt. P. B. M., 366.
- Aller (Som.), baptism of Danes at, 117.
- Alms-dishes (1518, 1655), 366.
- Altar, Roman, in Scilly, 239.
- Altar-relics, 264, 277-82.
- Amarna, Tell el, excavations at, 143-4.
- Amber beads, 94, 211.
- Ambler, L., 366.
- Amesbury (Wilts.), discoveries at, 125-30, 164.
- Ancient monuments, 19-41, 59, 183-98; Inspectors, 58.
- Anderson, Dr. J., 180.
- Andrews, Dr. C. W., 325.
- Anglo-Saxon: bowl, 316, 320; brooches, 93, 94, 97; burials, 90, 92-7, 236, 307; cist, 92, 96; pottery, 91, 94.
- Anglo-Saxon Coins found in Finland*, 249.
- Animal motives in ornamentation, 124.
- Annunciation, the, painting on fifteenth-century panel, 300-2.
- Anthropology, International Institute of, 241.
- Antiquaries, Society of: anniversary meeting, 265-70; auditors, appointment of, 165; — report of, 264; Clerk, appointment of, 266; Council, report of the, 265-9; Library Committee, 265; losses by death, 266; officers and Council, election of, 269; Presidential address, 167-82; publications, 265; research work, 265-6, 339; statutes, revision of the, 164, 265; women admitted as Fellows, 265.
- Antiquities, ban on the export of, 178-9.
- Antlers, deer, 34, 55, 84.
- Antrobus, Sir Edm., 19.
- Arabic art, 331, 332, 336.
- Archbishop, Consecration of an, alabaster table of, 227, 228.
- Argos (Greece), pottery and bronze and ivory objects, 208-9.
- Armlets, bronze, 210; bronze wire, 22.
- Armstrong, A. L., 81, 165.
- Armstrong, E. C. R., 48, 122, 131, 140, 341; *Guide to the Collection of Irish Antiquities: Catalogue of Irish gold ornaments in the Collection of the Royal Irish Academy*, 69.
- Arran (Bute), Irish gold objects, 236.
- Arrow-heads, flint, 86, 138, 159, 235, 295.
- Arts in Early England, The*, 243.
- Aryan race, 102-4.
- Ascension, the, alabaster tables of, 166, 222, 225-7.
- Ashby, Dr., 61.
- Ashby Rails, New Forest, A descriptive account of the Roman pottery made at*, 68-9.
- Asser and the battle of Ethandun, 105, 110, 112, 113, 117, 118, 121.
- Athelney (Som.), 107-11, 117-19, 121.
- Athens, bronze and ivory objects, 207-8, 214, 218.
- British School at, 202, 219.
- Atkins, Sir I., 166.
- Atkinson, Prof. D., 311, 312.
- Aubrey, John, 30, 34, 40, 60, 184, 187.
- Auden, Rev. T., 266, 267.
- Augustinian Order in Palestine, 3, 4, 6.
- Aurignac period, 98, 99, 101, 143.
- Awl, iron, found at Stonehenge (Wilts.), 29.

- Axe-hammers, stone, 125-30, 136, 164, 235, 291-2, 297, 347.
 Axes: bronze, flat, 294; shell-mound, 55, 159, 160.
- Baddeley, St. Clair, 236, 237.
 Baildon, W. P., 314.
 Baillie, Very Rev. A. V., 166.
 Balfour, H., 87, 91.
 Ballard, A., *An Eleventh-Century Inquisition of St. Augustine's, Canterbury*, 148-50.
 Bangle, shale, 29.
 Bardwell (Suffolk), stone axe-hammer, 128, 129.
 Barnard, Sir Herbert, 266, 267.
 Barnwood (Glos.): palaeolithic implement, 234; Roman burials, 236-7.
 Barrows, 187, 196, 197, 283, 288, 292, 293, 297, 298. See Wayland's Smithy.
 Battle-axes, stone, 127, 129.
 Baynes, E. N., 165, 265, 316, 320.
 Beads: amber, 94, 211; bronze, 33, 94, 210; clay, 210; glass, 94; inlaid paste, 44; stone, perforated, 290.
 Beakers, 126, 128, 129, 130, 134.
 Beddoe, Dr., 285.
 Bell, Miss G. L., 165.
 Benedictine Order in Palestine, 4.
 Berkyng, Richard de, abbot of Westminster, 57.
 Berlin, Kaiser-Friedrich Museum: bronze *polycandela*, 334.
 Bethlehem, cathedral church and convent of the Nativity at, 4.
 Betrayal, the, depicted on silver flagon, 43.
 Bexley Heath (Kent), hoard of flint celts, 365.
 Bidder, Col., 127.
 Birds, bronze figures of, 202, 203, 205, 207, 208, 210, 212, 216, 221.
 Birkbeck, R., 266.
 Blackmore, Dr., 126.
 Blenkinsop, C. H., 321.
 Bloodhound Cove (Cornwall), prehistoric remains, 290-3.
 'Bluestones', found at Stonehenge (Wilts.), 39, 40, 41.
 Bone Age, 159.
 Bone objects: dagger, 316, 319; fragments, 20-4, 30, 34; harpoons, 347; implements, 55; spear-heads, 99, 103; tools, 82, 84; trial-piece of the Viking period, 365; weapons, 99.
 Bonsor, G., 344.
 Book stamps, 365.
 Boot-nails, Romano-British, 21, 340.
 Borers, flint, Spiennes (Belgium), 54.
 Borough Bridge (Som.), 109, 110, 118, 119.
 Bosanquet, R. C., 219.
 Boston, Lord, 316, 320.
 Boston Museum (Massachusetts), 173-4, 178.
 Bouillon, Godfrey de, 6.
 Boulder-clay in Suffolk, date of the, 61.
 Bournemouth (Hants), earthworks near, 339.
 Bowls: Anglo-Saxon, 316, 320; neolithic, 165, 316-20; Roman, silver, 42, 43.
 Brabrook, Sir E., 266.
 Bracelets: bronze, 210; gold, 70.
 Bratton (Wilts.), 115, 116, 117.
 Braybrooke Church (Northants), late sixteenth-century helmet, 270.
 Breuil, Abbé H., 140, 342-4.
 Brick, burnt, 20.
 Brinkmann, A., and Shetelig, H., *Ruskeneset: en stenalders jagtplass*, 251.
 Britain, polygonal type of settlement in, 166, 303-15.
 British Museum, 170-3, 175-9; appointments, 338; axe-hammers, 127; bronze *polycandela*, 334, 335; chalice, pre-Reformation, 57; Cotton Genesis, 366; currency-bars, 326; gold glasses, 366; Guide-books, 58-9; ivory panel, 224; Library, 176-7; Medieval collections, 59; neolithic bowl, 320.
 British trackways, 111, 112.
 Brixton Deverill (Wilts.), 111, 113, 114, 115, 119.
 Brøgger, A. W., *Ertog og Øre: den gamle norske vegt*, 351.
 Brighter, or Newtown Limavady (co. Derry), hoard from, 69.
 Bronze Age, 126, 127, 129, 130, 134-7, 284, 294, 298; cremation burials, 31, 32, 34, 40, 41; gold ornaments, Irish, 69, 131, 134; hoards, 166; pottery, 20, 21, 25, 31, 33, 82, 84.
 Bronze objects: armlets, 210; beads, 33, 94, 210; bracelets, 140, 210; brooches, 204, 209-11, 284, 339; casting, Irish, 122-4; crescent-shaped object, 287; dagger, 290; dagger-blades, 128; disc, 94; figures of horses and birds, 202-8, 210, 212, 216, 221; finger-rings, 140; fragments found with *polycandela*, 330-3; hub-bands, 140; Irish shrine, fragment of, 48-51; jug, 210; knife-dagger, 292; model shield, 365; necklace, 210; object from a barrow, 136, 137; pendants, 210; pins, 206, 283, 284, 288, 290, 291; *polycandela*, 264, 328-37; ring, 29; spear-heads, 316, 319; 'spectacle' brooches, 204, 209, 210; spiral chain, 210; spiral finger-rings, 211; strap ornament, 33; tripod pot, 240; tweezers, 82; various objects, Hispano-Arabic, 335, 336; wire armlet, 22.

- Brooches: 'applied', 94, 97; bronze, 204, 209-11, 284, 339; cross-bow, 339; iron, 339; ivory, 209; Romano-British, 60, 92; 'saucer', 93, 97; silver, 46; 'spectacle', 209, 210, 215, 216.
- Brown, G. Baldwin, 58; *The Arts in Early England*, 243.
- Brussels, Royal Museum of Natural History, 55.
- Bryn y Gefeiliaw (Carnarvonshire), excavations at, 60-1.
- Buckles: iron, 23; silver, 46.
- Budgen, Rev. W., 236.
- Bulford Down (Wilts.), axe-hammer, 127.
- Burials: Anglo-Saxon, 90, 92-7, 236, 307; Bronze Age, 125-6; Early British, 339; Frankish, of the fourth century, 55; geometric period, 207, 209-11; Iron Age (?), 283-6, 298; Romano-British, 90-1, 95, 96, 141, 236, 309, 340. *See* Cremation burials.
- Burkitt, M. C., 234.
- Bushe-Fox, J. P., 58, 313, 326.
- Butleigh (Som.), 108, 109, 118.
- Buxton, L. H. D., 60, 87, 164, 184, 190, 191, 340.
- Byzantine architecture at Jerusalem, 6, 8, 10, 11, 12, 15, 18.
- Caesar's Camp, Wimbledon (Surrey), polygonal type of settlement, 305, 306.
- Cairo Museum: bronze *polycandelon*, 332-3, 335.
- Calleva Atrebatum: *see* Silchester.
- Campaign period, 98, 100, 103.
- Camp-chair, Roman general's, 141.
- Camps, 237, 303-5.
- Canterbury (Kent), polygonal camp, 304.
- Canterbury Cathedral, heraldry in the Chichele porch at, 164.
- Canterbury, *St. Augustine's, An Eleventh-Century Inquisition of*, 148-50.
- Carder Low (Derby), stone axe-hammer, 128.
- Carmichael, Lord, 269.
- Carndonagh cross (Donegal), 49.
- Casson, S., 166, 199.
- Casterley Camp (Wilts.), Early Iron Age pit-dwellings, 126.
- Cataclews (Cornwall), prehistoric remains, 293, 297.
- Catalan embossed sheet-metal work, medieval, 264.
- Celtic, Late: culture, 160; iron and bronze objects, 140; pottery, 140-1, 283, 284; remains in the Mendips, 140; urn field, 339.
- Celts, 55, 84, 86, 235, 316, 347, 365; flanged, 136; flat, 154.
- Cemeteries: *see* Burials.
- Chain, spiral, of bronze, 210.
- Chalices, pre-Reformation, 56-7.
- Champ de Chastellier, near Avranches, La Manche, polygonal type of settlement, 304, 305.
- Chandler, P. W., 166, 264.
- Chapman, Sir B., 48.
- Charles I, book stamp of, as Duke of York, 365; coins of, 341.
- Chauchitsa (Greece), bronze and other objects, 209-11, 215, 216.
- Cheetham, F. H., 365.
- Chelles period, 54, 55.
- Chest, fifteenth-century, with painted panels, 166.
- Chichester (Sussex), polygonal camp, 304; pre-Reformation chalice, 56.
- Children of the Chapel Royal, 52-3.
- Christ before Pilate, alabaster table of, 225.
- Christian symbolism on Roman silver plate, 42, 43.
- Christopher, St., alabaster figures of, 225, 228-31.
- Chosroes II, 4.
- Chubb, Sir C., 19.
- Church plate: alms-dishes, sixteenth and seventeenth century, 366; chalices, pre-Reformation, 56-7; communion plate, seventeenth century, 270; pewter coffin-chalice and paten, early, 56-7.
- Cinerary urns, 127, 293, 339, 366.
- Cissbury Camp (Sussex), 142.
- Cist, Anglo-Saxon, 92.
- Cist-burials, 130, 283-4.
- Cistercian churches, 271-7.
- Clapham, A. W., 3, 264.
- Clark, E. T., 266.
- Clark-Maxwell, Rev. W. G., 166, 225.
- Claudius Gothicus, coin of, 36.
- Clay bead, 210.
- Cley Hill (Wilts.), 114.
- Clinch, G., 145, 165, 269.
- Cockerell, S. P., 266, 267.
- Codrington, Dr. O., 266, 267.
- Coffin-chalice, pewter, 56-7.
- Coffins, stone, 57, 340.
- Coins: Anglo-Saxon, 249; British, 297, 307; English, 25, 240, 249, 341; Irish, 341; Roman, 20, 36, 44, 60, 68, 91-4, 112, 237, 295, 308, 309, 314, 339; Scottish, 240, 341; Spanish, 341.
- Collingwood, R. G., 165.
- Colman, R., 365.
- Commont, Prof., 54.
- Constans, coin of, 94.
- Constantine Church (Cornwall), medieval remains, 288.
- Constantine Island (Cornwall), prehistoric remains, 286-7, 294-6, 298.
- Constantine Monomachus, 4, 6.
- Constantine the Great, churches built at Jerusalem by, 4, 6, 13, 14, 15.

- Conway, Sir W. M., 269, 366.
 Cook, J. Douglas, 132, 133.
 Copper Age, 130, 137.
 Copper axe-hammer, 129.
 Coptic convent at Jerusalem, 14, 17.
 Cornwall, Royal Institution of, 133, 139, 164, 365.
 Corrughan (Dumfries), alabaster table of the Ascension, 225.
Cowdray and Easebourne Priory in the County of Sussex, 63.
 Craven, Earl of, 183, 184, 197.
 Crawford, O. G. S., 58, 165, 238, 283, 366.
 Cremation burials, 31, 32, 34, 40, 41, 95, 96, 236, 339.
 Creswell Crags (Derby), engraved horse's head on bone, 81.
 Crescents: gold, 131-9, 164, 294, 296, 365; stone and pottery, 135.
 Crispus, coin of, 92.
 Cro-Magnon race, 101.
 Cromer (Norfolk), early palaeoliths, 235.
 Cross, Carrying of the, and the Deposition from, alabaster tables of, 222-4.
 Cross, Irish, 49.
 Crowden, Capt. G. P., 365.
 Crowther, R. W., 270.
 Crucifixion, the, alabaster table of, 222, 225.
 Cruickshank, G. E., 166, 235.
 Crusaders, capture of Jerusalem by, 6, 8.
 Cunnington, Wm., 34, 36.
 Curle, A. O., 42, 209.
 Currency-bars, iron, 166, 188, 189, 321-7.
 'Cymbalum', supposed, 366.
- Daggers: bone, 316, 319; bronze, 128, 290; flint, 54, 55; iron, 287; slate, 298.
 Dale, W., 40, 86, 166.
 d'Almaine, H. G. W., 59, 60, 183, 184, 197, 366.
 Dalton, O. M., 269, 337, 338.
 Danes and the battle of Ethandun, 105-21.
 Darlington (Durham), flint implements, 235.
 Dartford (Kent), Priory and 'Manor' of, 264.
 Datchet (Bucks.), axe-hammer from the Thames, 127.
 Davis, Rev. F. N., 166, 264.
 Dead, cults of the, 277-8.
 Déchelette, J., 135.
 Deer antlers, 34, 55, 84.
 Deer-horn picks, 36.
 Denmark, flint implements, 99, 102.
 Dering, Sir Edward, book stamp of, 365.
 Dickins, B., 58.
 Disc, engraved, of gold, 70.
- Dodona (Greece), bronze objects, 204, 216.
 Dorian culture, 212, 213, 216-18.
 Dorian Invasion, the, reviewed in the light of some new evidence, 166, 199-221.
 Dorling, Rev. E. E., 269, 365.
 Downend Camp (Som.), 108, 118, 119.
 Drapers Company, 131, 132, 139, 164.
 Draperstown (co. Derry), gold crescent, 131.
 Drift period, 61, 84, 141.
 Druidism, 136, 259.
 Dublin, National Museum: gold ornaments, 69; hoard of coins, 341.
 Dugdale, W. F. S., 366.
 Duncan, L. I., 270.
 Dundon Hill (Som.), 107, 109, 110, 119.
- Early Iron Age, 82, 126, 141, 284, 285, 319, 326, 365.
 Earthenware, glazed, 21, 23.
 Earthworks, 303-11, 339.
 Easebourne, priory of (Sussex), 65.
 Eastbourne (Sussex), discovery of skeletons at, 236.
 East Kennet (Wilts.), stone axe-hammer and other antiquities, 128.
 Egbryht's Stone, 111-14, 120, 121.
 École des Chartes, centenary of the, 241.
 Edinburgh, Royal Scottish Museum: objects from Kalindoia (Greece), 209.
 Edington (Som.), possible site of the battle of Ethandun, 105, 107-9, 118, 120.
 Edington (Wilts.), possible site of the battle of Ethandun, 105, 109, 110, 112-15, 118, 120.
 Edmonds, C. W., 186.
 Edward III, coins of, 240.
 Edward IV, coins of, 240.
 Edward VI, coins of, 341.
 Egypt Exploration Society, 143, 144.
 Egyptian antiquities, exhibitions of, 338.
 El Akmar, mosque of, 11.
 Elatea (Greece), bronze objects, 207.
 Elizabeth, coins of, 25, 341.
 Enamels, Spanish champlévé, 264.
 End-scrappers, 54, 61, 159.
 Engleheart, Rev. G. H., 40, 126.
 English churches, eastward and other additions to, 165.
 Engravings upon flint crust at Grime's Graves (Norfolk), 81-6, 165.
 Enlart, C., 241.
 Entombment, the, alabaster table of, 222, 224, 225.
 Eolithic implements, 54, 55.
Ertog og Øre: den gamle norske vegt, 351.
Essex, An Inventory of the Historical Monuments in, 152-3.

- Ethandun, the site of the battle of, 105-17; a reply, 118-21.
- Evans, Sir A., 40, 87, 89, 135, 187.
- Evans, Sir E. V., 269.
- Evans, Sir J., 129, 366.
- Evans, Lady, 366.
- Excavations, 19-41, 42-7, 60-3, 81-5, 87-97, 125, 140-3, 164-6, 191-7, 202-11, 232, 233, 235, 237, 240, 251, 265, 266, 311, 321, 325, 339, 345-6, 366.
- Fall of Man, depicted on silver flagon, 43.
- Farrar, P., 125, 126.
- Fass, A. H., 300, 301, 302.
- Fees, *The Book of*, 349.
- Fell, *Sarab, of Swarthmoor Hall, Household Account Book of*, 348.
- Filmer of East Sutton, arms of, 366.
- Finger-rings: bronze, 140; spiral, 210, 211.
- Finland, *Anglo-Saxon Coins found in*, 249.
- Flagon, silver, portion of, depicting scenes from Scripture, 43, 44.
- Fleet, Lines., A Terrier of*, 148-50.
- Flénu, Lc, industry, 55.
- Flint implements, 20, 21, 23-5, 27, 32-4, 54-5, 61, 83-6, 99-104, 138, 159, 235, 294, 295, 316, 322, 338, 347, 365.
- Flower, C. T., 166.
- Food-vessel, 291-2.
- Foreign stone found at Stonehenge (Wilts.), 20-5, 29, 34, 36.
- Forsdyke, E. J., 165.
- Fosse Way, 107, 108.
- France, flint implements in, 99, 101, 103.
- Franciscan Order in Palestine, 14.
- Frankish cemetery of the fourth century, 55.
- Freer, Major W. J., 265.
- Freshwater (I. of Wight), cist-graves, 284.
- Frilford (Berks.), excavations at, 87-97.
- Gardner, Dr. E., 165, 211, 215 n., 218, 365.
- Gaulish settlements in Britain, 303-15.
- Geer, Baron G. de, 98.
- Genesis, the Cotton, 366.
- Geoffrey of Monmouth, 113.
- Geology, 61, 82, 90.
- Geometric culture and art, 202, 204-12, 214-19, 283.
- Germanic people, 101-3.
- Gibbons, F., 238.
- Gibbs, Archdeacon, 269.
- Gibson, J., 366.
- Gildea, Col. Sir Jas., 266, 267.
- Gjessing, H., *Rogalands Kulturhistorie*, 347.
- Glass beads, Anglo-Saxon, 94.
- Glass painting: panel with arms, 366.
- Glasses, gold, 366.
- Gloucestershire, palaeolithic implement from, 234.
- Gold objects: crescents, 131-9, 164, 294, 296, 365; fibula, 236; finger-rings, 210; glasses, 366; ornaments, 69-70; penannular object, 236; plaque, 210; ring, 366; spiral, 210; wire rings, 210.
- Goldziher, I., 134.
- Gómez-Moreno, M., 328, 330, 332.
- Gowland, Prof. W., 20.
- Graig-Lwyd (Carnarvon), excavations at, 235.
- Granada Museum (Spain): bronze *poly-candela*, 328, 331, 332, 335.
- Grave-furniture: Anglo-Saxon, 92-5; Romano-British, 91-2.
- Gray, G. E. K., 165.
- Greece, excavations in, 202-11.
- Greek architecture at Jerusalem, 10; convents at Jerusalem, 14, 16.
- Greenwood, Alice D., *Selections from the Paston Letters*, 248.
- Greg, T. F., 266.
- Griffin, R., 164, 165, 269, 365.
- Griffiths, P. D., 165.
- Grime's Graves (Norfolk), discovery of engravings upon flint crust at, 81-6, 165.
- Grimsdyke, the, 235.
- Guildhall Museum, 175, 179.
- Guthrum and the battle of Ethandun, 105, 107-11, 115, 117, 119-21.
- Haddon, Dr., 285, 288, 294.
- Haggard, Sir H. Rider, 366.
- Hainaut à Soignies, Esquisses d'une monographie des couches quaternaires visibles dans l'exploitation de la Société des carrières du*, 251.
- Hakim, Fatemite Caliph, destruction of the Holy Places by, 4, 6.
- Hall, Dr. H. R., 219.
- Hallstatt period, 216, 221, 284.
- Hammer-head, iron, 29.
- Hammer-stones, 21, 22, 23, 25, 31, 32, 54, 286.
- Hand-axes, 55, 61, 84.
- Hankey, A. A., 365.
- Hardway, the (Wilts.), 111, 114, 297.
- Harland, B. T., 165, 270.
- Harlyn Bay (Cornwall), ancient settlements at, 283-99.
- Harlyn Bay Museum (Cornwall): prehistoric objects, 287, 295.
- Harpoons, bone, 347.
- Harroway, the (Hants), 297, 298.
- Hasluck, F. W.: *see* Jewell, H. H.
- Haverfield, F.* (memoir), 249.
- Haversham, Lady, 131, 132.
- Hawley, Lt.-Col. W., 19, 127, 265, 366.
- Hayter, A. G. K., 60, 144.

- Heaton, B., 184, 197.
Heddington (Wilts.), possible site of the battle of Ethandun, 105.
Hedsor (Bucks.), neolithic bowl and other objects from the Thames at, 316-20.
Hellqvist, Prof. E., 101.
Hellyar, Mr., 288-92, 294, 299.
Hemp, W. J., 58.
Henry V and VI, coins of, 240.
Henry of Huntingdon, 110.
Heraclius, 4.
Heraldry: achievement of the arms of Raven of Elworth Hall, 365; in the Chichele porch at Canterbury Cathedral, 164; panel of glass with the arms of Filmer of East Sutton, 366; seventeenth-century English heraldic MS., 264.
Heroes, cults of, 277-8.
Hesbay (Belgium), hut-circles of, 55.
High Ham (Som.), 107, 109, 110, 118, 119.
High Lodge, near Mildenhall (Suffolk), excavations at, 61.
Higson, Capt. G. H., 166, 365.
Hildburgh, Dr. W. L., 166, 222, 264, 328.
Hill, A. F., 269.
Hoards: Bronze Age, 166; coins, 240, 341; flint celts, 365; gold ornaments, Irish, 69, 70; iron currency-bars, 166, 321-7; silver plate, Roman, 42-7.
Hoare, Sir R. C., 111, 113, 186, 298.
Hobson, R. L., 338.
Hod Hill, near Blandford (Dorset), bronze model shield of the Early Iron Age, 365.
Holmes, Dr. T. Rice, 136.
Hone, Romano-British, 22.
Honorius, coins of, 44.
Hooley, R. W., 166, 285, 292, 299, 321, 326.
Hope, Sir W. H. St. J., 56, 165; *Cowdray and Easebourne Priory in the County of Sussex*, 63.
Horn-core, 22.
Horses, bronze figures of, 202-8, 210, 212, 216, 221.
Houghton, F. T. S., 165.
Household accounts, 348-9.
Hubba and the battle of Ethandun, 105, 110, 117-21.
Hudd, A. E., 266, 268.
Hungary, copper axe-hammers, 129.
Hut-circles in Belgium, 55.
Inscriptions, Runic, 59.
Ipswich (Suffolk), plateau finds at, 141.
Irish antiquities: bronze casting, 122-4; gold crescents, 131-9, 164; gold in Scotland, 236; shrine, imperfect, 48-51.
Irish Antiquities, Guide to the Collection of, 69-70.
Iron objects: awl, 29; brooch, 339; buckle, 23; currency bars, 166, 188, 189, 321-7; dagger, 287; hammer-head, 29; knives, 29, 94, 298; nail, 23; pins, 93, 283, 284; shackles, 140; spear-heads, 316, 319.
Italy, archaeological work in, 61-3.
Ivory carving, 207-8, 213, 270; panel, 224; plaque, 224; 'spectacle' brooch, 209.
Jack Straw's Castle (Wilts.), prehistoric remains, 292, 297.
James I, II, III, and IV of Scotland, coins of, 240.
James I and VI, coins of, 341.
James and John, ES., alabaster table of, 227, 230.
James, Rev. E. O., 165.
Jeffery, G., 3, 10.
Jenkinson, C. H., 269.
Jerusalem, Latin Monastic Buildings of the Church of the Holy Sepulchre, 3-18.
Jewell, H. H., and Hasluck, F. W., *The Church of Our Lady of the Hundred Gates in Paros*, 146.
John of Wallingford, 110.
Johnson, C., 52.
Joyce, Sir M., 269.
Jug, miniature, of bronze, 210.
Jullian, C., 134.
Kalindoia (Greece), bronze and other objects, 209-11.
Karslake, Lt.-Col. J. B. P., 166, 269, 303, 314.
Keith, Sir A., 165, 236, 281.
Kendall, Rev. H. G. O., 86.
Kent, B. W. J., 85.
Kent, Roman burials in, 141.
Khankah Sulahiyyeh, mosque of, at Jerusalem, 8, 17, 18.
Killua Castle (co. Westmeath), Irish bronze casting, formerly preserved at, 122-4.
Killua shrine, 48-51.
Kindersley, Major G. W., 366.
King, H. H., 270.
King's armouries, keeper of the, 140.
Kingsettle Hill (Wilts.), 111.
Kingsford, C. L., 166, 264, 269, 270, 313, 342, 365, 366.
Knife-dagger, bronze, 292.

Ice period, 98-104.
Igglesden, C., 166, 264.
Incense-cup, 290.
India and the export of antiquities, 178-9.

- Knife-sharpener, slate, 290, 291, 298.
 Knight, A. C., 366.
 Knives: flint, 54, 83, 84; iron, 29, 94, 298.
 Lamb, C. G., 294, 297 n., 299.
 Lambert, F., 165.
 Lambourn (Berks.), polygonal type of settlement, 307-10, 313-15.
 Lancaster, W. T., 266, 268.
 Lasteyrie, Le Comte Robert de, 242, 266, 269.
 La Tène period, 284, 287, 326.
 Latin monastic buildings at Jerusalem, 3-18.
 Lattoo (co. Cavan), find of gold objects, 70.
 Layard, Miss N. F., 141, 166.
 Lazar house, Norwich, 341.
 Lead relic-holders, 277, 280-1.
 Leeds, E. T., 87, 90, 96, 138, 316, 320.
 Lesnewth (Cornwall), Irish gold crescent, 131-3.
 Letcombe Castle (Berks.), polygonal camp, 305, 306, 311.
 Lethaby, W. R., 165, 366.
 Leukas (Greece), bronze objects, 206.
 Lewis, A. L., 140, 187.
 Lincoln, pre-Reformation chalice, 56.
 Lisanover (co. Cavan), gold crescent, 133.
 Local Secretaries, list of, approved, 366.
 LONDON:
 City, recent excavations in the, 165.
 Defences of the Thames in 1588, plan of, 264.
 Hare Court church, Canonbury, seven-teenth-century communion plate, 270.
 Houses of the Tudor period, 264.
 London Bridge, old, 239.
 Miles Lane, Roman remains, 237.
 Queenhithe Ward, house of Robert de Parys in, 342.
 St. Mary Woolnoth, two alms-dishes from, 366.
 St. Stephen's, Walbrook, 341-2.
 Train bands, 311.
 Westminster Abbey, an early pewter coffin-chalice and paten found in, 56-7; recent excavations at, 232-3; supposed 'cymbalum' from, 366.
London, Catalogue of a Collection of Early Drawings and Pictures of, 152.
 London County Council Museum, 179.
 London Museum, 179.
 Longman, W., 165.
 Lowbury (Berks.), polygonal type of settlement, 311-14.
 Lower Slaughter (Glos.), Roman stone coffin, 340.
 Lucas, J. F., 127.
 Lunettes, 131, 138, 139. *See* Crescents.
 Luxford, J. S. O. Robertson, 166.
 Lynam, C., 266, 268.
 Lyons, Lt.-Col. G. B. Croft, 164; 165, 320.
 Macdonald, Dr. G., *F. Haverfield 1860-1919*, 249.
 Maces, flint, Spiennes (Belgium), 54, 55.
 MacLagan, E. R. D., 165.
 Madeleine period, 98, 99, 100.
 Madrid, Archaeological Museum: Hispano-Arabic bronze-work, 336.
 Magnentius, coin of, 94.
 Major, A. F., 105 ff., 118, 314.
 Manchán, St., shrine of, 49.
 Mann, I., 236.
 Maodhóg, St., shrine of, 49.
 Margaret Stokes lectures, 140.
 Markham, Major C. A., 270.
 Marshall, Rev. W., 266.
 Mas d'Azil period and industry, 55, 98, 100, 160.
 Maximilian, coin of, 240.
 Maxwell-Lyte, Sir H., *Liber Fredorum. The Book of Fees, commonly called Testa de Nevill*, 349.
Mediaeval England, Chapters in the Administrative History of: The Wardrobe, the Chamber, and the Small Seals, 66.
 Medieval remains, 283, 288.
 Medina Elvira (Spain), ruins of, 328, 330, 331.
 Mendips, Celtic remains in the, 140.
 Mentone (Italy), small flint flakes, 99, 103.
 Mesvin industry, 55.
 Metal-work, medieval Catalan embossed, 264.
 Metrology, early, 351-2.
 Microliths, 99, 103.
 Middens, 283, 286, 287, 294-6, 299.
 Mile End (Berks.), 308, 309.
 Millar, E. G., 166, 264.
 Minety (Wilts.), ancient tile-factory, 238.
 Minns, Dr. E. H., 165.
 Mitford, Maj.-Gen. B. R., 366.
 Modestus, Hegumenos of St. Theodosius, 4.
 Moir, Reid, 235.
 Montelius, Prof. O., 98, 129, 130.
 Moon-worship, 134-8.
 Moore, Sir N., *History of St. Bartholomew's Hospital*, 65.
 Mosaic pavement, Roman, 238.
 Moseley, Prof. H. N., 87, 89.
 Moses striking the Rock, depicted on silver flagon, 43.
 Moslem art, 332.
 Moslem occupation of Palestine, 3, 8, 13.
 Mosque-lamps, 332.

- Mosques, 6, 8, 11, 12, 17, 18.
 Mother Ivey's Bay (Cornwall), barrows near, 283.
 Moustier, Le, period and industry, 55, 61, 81, 84, 85, 98, 99, 141, 143.
 Munro, Dr. Robert, 76-8, 269.
 Munro lectures, 140.
 Murray, Capt. W. H., 366.
 Museums in the Present and Future, 167-82.
 Mycenae (Greece), excavations at, 208, 218.
 Mycenaean culture, 201, 202, 204, 206-8, 212, 215, 217.
 Mylne, Rev. R. S., 266.
 Myres, Prof. J. L., 166, 220.
- Nails, iron, 21, 23, 340.
 Naples Museum: alabaster tables, 222, 223.
 Necklace, bronze, 210.
 Needle, slate, 298.
 Neilson, N., *A Terrier of Fleet, Lincs.*, 148.
 Neolithic implements, 55, 347.
 Neolithic period, 86, 98, 100, 129, 138, 319; bowls, 165, 316-20; paintings, 343-4; pottery, 316, 320.
 Nevill, *Testa de*, 349.
 Newall, R. S., 36.
 Newcastle-on-Tyne Museum: axe-hammer, 128.
 New Forest (Hants), Roman pottery sites in the, 166, 252-3.
 Newton, F. G., 144.
 Noble, S. W. A., 166.
 Nordman, C. A., *Anglo-Saxon Coins found in Finland*, 249.
 Norman, Dr. P., 165.
 Norman architecture at Jerusalem, 3, 10, 11.
 Norsebury (Hants), polygonal camp, 305.
 North, Lt.-Col. O. H., 166.
 Northbourne, Lord, 269.
 Norway: copper axe-hammer, 129; flint implements, 99, 160.
 Norwich (Norfolk), lazar house, 341.
- Oates, F. A. H., 140.
 Odda and the battle of Ethandun, 105, 110.
 Office of Works, H.M., 19, 36, 265.
 Old Street, the (Berks.), 306.
 Oliver's Battery (Hants), polygonal camp, 305.
 Olympia (Greece), bronze ornaments and pottery, 205-6.
 Omal culture, 55.
 Omar, Caliph, mosque of, 6, 8.
 Ordnance Survey, appointment of Archaeology officer, 58.
 Ornaments, silver, of Teutonic type, 46.
- Ospringe (Kent), excavations at, 366.
 Ostia (Italy), excavations at, 62.
 Ostrovo, Lake, pottery and 'spectacle' brooches, 209.
 Oswald, F., and Pryce, T. D., *An Introduction to the Study of Terra Sigillata*, 150.
 Overy, Rev. C., 60, 184, 197.
 Oxford intra Muros, *The Historic Names of the Streets and Lanes of*, 351.
 Oxford University Archaeological Society, 87.
 Oxfordshire Archaeological Society, 96.
- Pagan symbolism on Roman silver plate, 42, 43.
 Page, W., 314.
 Paintings: on English fifteenth-century panels, 166, 300-2; on glass panel, 366; on panels of a fifteenth-century chest, 166; palaeolithic and neolithic, 343-4.
 Palaeolithic implements, 54-5, 99-104, 234, 237, 238.
 Palaeolithic period, 85, 86, 98-101; paintings and portraits, 141-2, 343.
 Palestine, archaeology in, 345-7; monastic houses, 3-18.
 Palmer, Dr. W. M., 366.
 Panels: ivory, 224; oak, English fifteenth-century, 300-2.
 Parcelly Hay, near Hartington (Derby), stone axe-hammer, 129.
 Paros, *The Church of Our Lady of the Hundred Gates in*, 146.
 Parsons, Prof. F. G., 366.
 Parys, Robert de, the house of, 342.
 Paston Letters, *Selections from the*, 248.
 Paten, pewter, 57.
 Payne, G., 78, 266, 268.
 Peake, Dr. A. E., 84, 85, 86.
 Peasemore, or Peysmer (Berks.), polygonal type of settlement, 308-10, 313, 314.
 Peers, C. R., 38, 59, 164, 183, 264, 269, 271, 282, 302.
 Peet, Prof. T. E., 144.
 Pendants, bronze, 210.
 Penney, N., *The Household Account Book of Sarah Fell of Sawarthmoor Hall*, 348.
 Penrose, G., 131-3.
 Persians, capture of Jerusalem by, 4.
 Perth, archaeological discoveries in, 240.
 Peruvian gold ring, 366.
 Petrie, Prof. Flinders, 40, 144.
 Pewter coffin-chalice and paten, 56-7.
 Philip and Mary, coins of, 341.
 Philip the Fair of Burgundy, coin of, 240.
 Picks: deer-horn, 36; flint, 316.
 Pile-dwellings in Switzerland, 237.
 Pilgrim's Way (Hants), 297.
 Piltown skull, 142.

- Pins: bone, 31; bronze, 93, 206, 283, 284, 288, 290, 291; iron, 93, 283, 284.
 Pit-dwellings, 321-2, 325-7.
 Pixley, F. W., 165.
 Plaques: gold, 210; ivory, 224.
 Plate, silver, hoard of, 42-7. *See* Church plate.
 Plateau finds at Ipswich (Suffolk), 141.
 Plummer, John, Master of the Children, 52-3.
 Polden Hills (Som.), possible site of the battle of Ethandun, 105, 107-10, 113, 117-20.
 Polycandela, bronze, 264, 328-37.
 Polygonal type of settlement in Britain, 303-15.
 Pompeii, excavations at, 62.
 Portraits, palaeolithic, 141-2.
 Pottery: Anglo-Saxon, 91, 94; Bronze Age, 20, 21, 25, 31, 33, 82, 84; Early British, 339; Early Iron Age, 322, 324, 325; geometric, 205, 207-9, 212, 219-21, 283; Late Celtic, 140, 141, 283, 284; medieval glazed, 240; neolithic, 316, 320; prehistoric, 55, 287-90; Romano-British, 20-7, 29, 31-4, 60, 61, 82, 91, 92, 125, 238, 252-3, 308, 309, 311, 314.
 Pottery sites in the New Forest (Hants), 166, 252-3.
 Praetorius, C. J., 130, 138.
 Pre-Chelles industry, 54-5.
 Prehistoric Society of East Anglia, 61, 85.
 Premonstratensian abbey of Mount Joy, or Nebi Samwil (Palestine), 4.
 Preston, A. E., 166, 263.
 Privy Seal, office of, 67.
 Pryce, T. D.: *see* Oswald, F.
 Ptous, Mt. (Greece), bronze objects, 207.
 Public Record Office, 52.
 Quarrell, W. H., 366.
 Racial types in Oxfordshire villages, 95-6 n.
 Raven of Elworth Hall, achievement of the arms of, 365.
 Rawlence, E. A., 105, 118 ff., 264.
 Raynes, Rev. H. A., 366.
 Read, Sir C. Hercules, 1-2, 41, 86, 97, 130, 139, 164-7, 197, 221, 264, 265, 269, 270, 282, 302, 337, 338, 365, 366.
 Reinach, S., 83, 134, 138, 139.
 Relic-holders from altars, 264, 277-82.
 Resurrection, the, alabaster table of, 222, 225.
Revue anthropologique, 241.
 Richardson, J. S., 58.
 Ridgeway, Sir W., 136.
 Ridgeway, the (Berks.), 306, 311.
 Rievaulx Abbey (Yorks.), 271-7; two relic-holders from altars, 264, 277-82.
 Rings: bronze, 29, 284; gold, 366.
 Robert III of Scotland, coins of, 240.
 Robinson, Very Rev. J. A., 232.
Rogalands Kulturhistorie—Skrifter utgitt av Stavanger Museum, 347.
 Rolleston, Prof. G., 87, 89, 95-7.
 Romaos, M., 205.
Roman pottery made at Ashley Rails, New Forest, A descriptive account of the, 68.
Roman pottery sites at Sloden and Black Heath Meadow, Linwood, New Forest, 252.
 Roman remains, 43-7, 55, 60, 87-91, 112, 141, 165, 236-9, 252-3, 270, 308-15, 340, 365, 366.
 Roman roads, 89, 107, 108, 112, 114, 305, 306, 310.
 Romanesque architecture at Jerusalem, 10-18.
 Romano-British: brooch, 92; burials, 90-1, 95, 96, 141; cinerary urn, 366; pottery, 20-7, 29, 31-4, 60, 61, 68-9, 82, 91, 92, 125, 238, 252-3, 308, 309, 311, 314; various objects, 21-3, 36.
 Rome, excavations at, 61-2.
 Rosenheim, M., 264.
 Rotheram, E. Crofton, 48.
 Royal Irish Academy, 48-51, 122-4, 341; *Catalogue of Gold Ornaments in the Collection of*, 69.
 Runic Inscriptions, Corpus of, 58.
Ruskeneset: en stenalders jagtplass, 251.
 Rutot, A., 54; *Esquisse d'une monographie des couches quaternaires visibles dans l'exploitation de la Société des carrières du Hainaut à Soignies*, 251.
 Sahara, Stone Age of the, 143.
 St. Acheul period and implements, 55, 141, 143.
 St. Albans Abbey (Herts.), excavations at, 142-3; twelfth-century ivory carving, 270.
St. Bartholomew's Hospital, History of, 65-6.
 Saladin, 4, 8, 18.
 Saleh Talayeh, mosque of, 11.
 Salisbury Museum (Wilts.): antiquities from Amesbury, 126.
 Salter, H. E., *The Historic Names of the Streets and Lanes of Oxford intra Muros*, 351.
 Samian ware, 25, 68, 253, 325, 339.
 Sanders, H. W., 269, 342.
 Sardinia, archaeological discoveries in, 62-3.
 Sarsen stones, 20-7, 29, 31-4.
 Saucer-stones, Anglo-Saxon, 93, 97.
 Saxon: *see* Anglo-Saxon.
 Scandinavia: cist-burials, 130; copper or bronze axe-hammers, 129; palaeolithic implements, 99-104, 159, 160.

- Scandinavian archaeology, 251.
 Scania: Ice period, 98-9; flint implements, 99, 100.
 Scilly, Roman altar in, 239.
 Scotland, stone trial-piece of the Viking period, 365.
 Scott, Dr. A., 188.
 Scott, Dr. R. F., 365.
 Scott, Sir Walter, 59, 183, 195, 198.
 Scottish regalia and Dunottar Castle, 166.
 Seaton (Devon), Roman remains, 237-8.
 Secano de la Mezquita (Spain), ruins of, 330, 331.
 Segontium (Carnarvon), excavation of, 60.
 Selsey Bill (Sussex), flint implement, 338.
 Seton, Dr. W. W., 166.
 Shearme, E., 266.
 Sheffield, Weston Park Museum; axe-hammers and bronze dagger-blades, 128.
 Shefford (Berks.), Saxon cemetery, 307.
 Shell-mound period, 100, 159, 160, 347.
 Sherborne Causeway (Dorset), 112.
 Shetelig, H.: *see* Brinkmann, A.
 Shield, bronze model, of the Early Iron Age, 365.
 Shrines, Irish, 48-51.
 Shropshire Archaeological Society, 266.
 Sickie, part of, 29.
 Sidebotham, J. B., 85.
 Side-scrappers, flint, 54, 55, 86.
 Signet, office of the, 67.
 Silchester (Calleva Atrebatum; Hants), polygonal type of settlement, 303-7, 309-12, 314, 315.
 Silver objects: bowl, 42, 43; brooch, 46; buckles, 46; ornaments, 46; plate, hoard of, 42-7; spoons, 43, 45; strap terminals, 46.
 Simpson, F. G., 365.
 Siret, L., 134, 137.
 Skeletons, human, 55, 89-91, 95, 101, 125, 126, 128, 136, 190-1, 236, 283, 285, 340.
 Skilbeck, C. O., 269.
 Skulls, human, 165, 285, 288.
 Slate dagger, 298; knife-sharpener, 290, 291, 298; needle, 298; slabs, 283, 295; spindle-whorls, 298-9.
 Sloane, Sir Hans, 170.
 Smith, Major Dorrien, 239.
 Smith, H. Clifford, 166, 300.
 Smith, R. A., 41, 59, 85, 97, 124, 126, 131, 138, 141, 164, 183, 319, 326, 365.
 Smith, Worthington, 141.
 Solomon, Judgement of, fifteenth-century wood-carving of, 166.
 Solutr  period, 98, 99, 101, 102, 143.
 Somerleigh Court, Dorchester (Dorset), Roman spoons, 270.
 Somerville, Rear-Adm. B., 366.
 South Downs (Sussex), camps on the, 237.
 Spain, archaeology in, 342-4; bronze *polycandela* from, 264, 328-37.
 Spanish champlev  enamels, 263.
 Sparta, excavations at, 202-9, 212-21.
 Spear-heads: bone, 99, 103; bronze, 316, 319; flint, 99, 102; iron, 316, 319.
 Spiennes (Hainault, Belgium), palaeolithic and neolithic discoveries at, 54-5.
 Spiers, Phen , 10.
 Spindle-whorls, 290, 298-9.
 Spoons, Roman, 43, 45, 270.
 Standard, Roman, 141.
 Standlow (Derby), axe-hammer, 127.
 Stavanger Museum, Rogaland: neolithic remains, 347.
 Steel, A. E., 266.
 Stevens, F., 126.
 Stevens, Rt. Rev. T., 266, 268.
 Stone Age, 99, 142, 143, 159, 161.
 Stone-axe factory in Wales, 235.
 Stone implements, 125-30, 136, 164, 291, 97, 338, 347.
 Stone objects: bead, perforated, 290; coffin, 57, 340; trial-piece of the Viking period, 365.
 Stonehenge (Wilts.): interim report on the exploration, 19-41, 265; second report, 366.
 ---, Aubrey's plan of (1666), 30, 34, 40.
 Stourton Tower (Wilts.), 109, 111, 113, 118.
 Strap ornament, bronze, 33.
 Str py industry, 54.
 Strong, Mrs. E., 164.
 Stukeley, Wm., 186.
 Sturge, Mrs. A., 365.
 Sumner, H., 166, 339; *A descriptive account of the Roman pottery made at Ashley Rails, New Forest*, 68; *A descriptive account of Roman pottery sites at Sloden and Black Heath Meadow, Linstead, New Forest*, 252.
 Surtees, Brig.-Gen. H. C., 166.
 Swarling (Kent), Late Celtic urn field, 339.
 Swarthmoor Hall (Lancs.), household accounts, 348-9.
 Sweden, palaeolithic implements found in, 98-104.
 Swiss lake-dwellings, stone and pottery antiquities, 135, 136, 237.
 Sword, of 'antenna' type, with iron blade and bronze hilt, 209-11, 215, 216, 221.
 Taplow (Bucks.), palaeolith, 338.
 Tapp, W. M., 36, 39, 41.
 Tardenois culture, 55.
 Taylor, Rev. A. D., 297, 299.
 Tenth Iter, the, 165.

- Terra Sigillata, An Introduction to the Study of*, 150-2.
 Tetricus, brass coin of, 20.
 Thames, the, objects from, 127, 165, 317-20.
 Thermon (Greece), bronze objects, 205.
 Thessaly, excavations in, 207.
 Thomas, Dr. H. H., 39.
 Thomas, Major H., 269.
 Thompson, M. S., 220.
 Thomson, H. L., 314.
 Thomson, Prof. A., 87.
 Thurnam, John, 183, 187, 188.
 Tile-factory, ancient, 238.
 Tiles, Roman, 94.
 Toms, H. S., 237.
 Tools, bone, 82, 84.
 Toulouse Museum: alabaster tables, 225.
 Tout, T. F., *Chapters in the Administrative History of Mediaeval England: The Wardrobe, the Chamber, and the Small Seals*, 66.
 Tracks, ancient, 296, 297, 305, 306, 308-11.
Traits d'union normands avec l'Angleterre avant, pendant et après la Révolution, 247.
Tranchets, 55.
 Traprain Law (Haddington), recent discovery of silver at, 42-7.
 Treasure trove, 341.
 Trevoise Head (Cornwall), 296; prehistoric remains, 295, 297, 299.
 Trial-pieces, bone and stone, of the Viking period, 365.
 Tripod pot, bronze, 240.
 Trundle, the (Sussex), polygonal camp, 304-5.
 Truro Museum (Cornwall), 131, 132.
 Tunorbury, South Hayling Island (Hants), polygonal camp, 304, 305.
 Tweezers, bronze, 82.
 Uffington Castle (Berks.), polygonal camp, 305, 306, 307, 311.
 Urn field, Late Celtic, 339.
 Urns, prehistoric, 288-90.
 Valens, coin of, 45.
 Valentinian II, coin of, 44.
 Vallance, A., 166, 302.
 Valois, Katherine de, 57.
 Vase, decorated, Anglo-Saxon, 94.
 Veii (Italy), excavations at, 62.
 Vessels: black-glaze, seventeenth century, fragments of, 341; two-handled, Late Celtic, 284.
 Vicars, Sir Arthur, 266, 269.
 Victoria and Albert Museum, 171, 173, 175; alabaster tables, 229, 231; dip-tych, 224; ivory plaque, 224; oak panel, fifteenth-century, 302.
 Viking period, bone and stone trial pieces of the, 365.
 Vincent, Père H., 3, 4 n., 13, 17.
 Visigothic metal-work, 332, 335; silver brooch, 46.
 Wales, National Museum of, 174.
 —, stone-axe factory in, 235.
 Wallace, W. G., 339.
 War records, local, 240.
 Ward, J., 196, 197.
 Ward, Mrs., 362.
 Wardrobe accounts, 66-7.
 Warren, E., 269.
 Warren, S. H., 235.
 Wayland's Smithy (Berks.), 59, 60, 71, 164, 183-98.
 Wear, river, near Sunderland, axe-hammer from, 128.
 Weaver, Sir L., 125, 164, 269.
 Welwyn (Herts.), recent discoveries of Roman remains, 336.
 Westbury (Wilts.), 105, 110, 114, 115, 118.
 Westbury Leigh (Wilts.), 114, 115.
 Westlake, Miss, 366.
 Westlake, Rev. H. F., 56, 165, 232, 281, 366.
 White Horse, Uffington (Berks.), 307, 308.
 White Horse, near Westbury (Wilts.), 114.
 Whiting, W., 366.
 Whitlemore, Prof., 144.
 Whitlingham (Norfolk), hoard of flint celts, 365.
 Williams, S. H., 366.
 Wilmer, George, of Stratford-le-Bow, book stamp of, 365.
 Wilsford (Wilts.), bronze object from a barrow, 136, 137.
 Winchester Museum (Hants): iron currency-bars, 326.
 Wire rings, gold, 210.
 Wise, Francis, 184.
 Wood-carving, fifteenth-century, 166.
 Woodeaton (Oxon.), excavations at, 96, 339.
 Woolley, L., 339.
 Worthy Down, Winchester (Hants), hoard of iron currency-bars, 166, 321-7.
 Wotton (Surrey), Republican denarius of the Gens Sergica, 237.
 Wright, Maj.-Gen., 237, 238.
 Wright, Thos., 183.
 Wroxeter (Salop), excavations at, 266.
 Yvon, P., *Traits d'union normands avec l'Angleterre avant, pendant et après la Révolution*, 247.

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